SDP-777ES

SERVICE MANUAL

US Model
Canadian Model
AEP Model

SPECIFICATIONS

System

Code format	16 bits linear
Audio channel	2 channel
Sampling frequency	48.0 kHz

Digital surround section

Delay time	0.1–80.0 msec, 0.1 msec steps L, R independent
Harmonic distortion	0.008% (at 1 kHz)
Dynamic range	90 dB, A network
Frequency response	REAR: 5 Hz–20 kHz $^{+0}_{-3}$ dB

Analogue surround section

Frequency response	CENTER: 110 Hz–100 kHz $^{+0}_{-3}$ dB SUBWOOFER: Cut-off frequency 110 Hz –12 dB/OCT

Inputs/outputs section

Audio inputs/outputs

Item		Data	
Line inputs	VIDEO 1-4, AUDIO (phono jacks)	Sensitivity: 250 mV	Impedance: 50 k ohms
Line outputs	VIDEO 1, 2 (phono jacks)	Output level: 250 mV	Impedance: 1 k ohms
	FRONT (phono jack × 2)	Maximum output level: 3 V	Impedance: 1 k ohms
	REAR (phono jack × 2)	Maximum output level: 3 V	Impedance: 1 k ohms
	CENTER (phono jack × 1)	Maximum output level: 4.5 V	Impedance: 1 k ohms
	SUBWOOFER (phono jack × 1)	Maximum output level: 3 V	Impedance: 1 k ohms

Video inputs/outputs

Item			Data	
			Voltage	Impedance
Inputs	VIDEO 1-4 (phono jack × 4)		1 Vp-p	75 ohms
Outputs	VIDEO 1,2,MONITOR (phono jack × 3)		1 Vp-p	75 ohms
S video inputs/ outputs	VIDEO 1, 2 MONITOR	Luminance signal	1 Vp-p	75 ohms, unbalanced
		Chrominance signal	0.286 Vp-p	75 ohms, unbalanced

General

Power requirements	120 V AC, 60 Hz
Power consumption	30 W
Dimensions	470 × 86 × 345 mm (w/h/d) ($18^{5}/_{8} \times 3^{1}/_{2} \times 13^{5}/_{8}$ inches) including projecting parts and controls
Weight	6.1 kg (13 lb 8 oz)
Accessories supplied	Remote commander (1) Connecting cord (3) Screws (M4 × 4) (see page 14.) Sony SUM-3 (NS) batteries (2)

DIGITAL SURROUND PROCESSOR

SONY®

TABLE OF CONTENTS

Section	Title	Page
	Specifications	1
	Safety Check-out	2
1.	**GENERAL**	
	Overview	3
	Parts Identification	4
	Connecting the System	5
	Installing the System	6
	Positioning the Speakers	6
	Start Playing the Program Sources Through the Processor	7
	Adjusting the Level of the System	7
	Adjusting the Surround Level More Effectively	8
	Creating a Sound Space of the Desired Size – Using Delay Time	9
	Making the Most Out of the Surround Sound	10
2.	**ELECTRICAL ADJUSTMENTS**	
	A/D Offset Adjustment	12
	VCA Offset Adjustment	12
	Distortion Factor Adjustment	13
	Surround Null Adjustment	13
	Prologic Block Operation Check	14
3.	**DIAGRAMS**	
	Pin Function of CXD1079Q (IC454) Digital Signal Processor IC	15
	Pin Function of μPD75206-045 (IC460) System Control's Microcomputer	17
	Semiconductor Lead Layouts	18
3-1.	I/O Section Printed Wiring Boards and Schematic Diagram	19
3-2.	Main Section Printed Wiring Boards	24
3-3.	Main Section Schematic Diagram	29
4.	**EXPLODED VIEWS**	35
5.	**ELECTRICAL PARTS LIST**	37
	Block Diagram	46
	Troubleshooting Guide	46

SAFETY-RELATED COMPONENT WARNING!!

COMPONENTS IDENTIFIED BY MARK ⚠ OR DOTTED LINE WITH MARK ⚠ ON THE SCHEMATIC DIAGRAMS AND IN THE PARTS LIST ARE CRITICAL TO SAFE OPERATION. REPLACE THESE COMPONENTS WITH SONY PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL OR IN SUPPLEMENTS PUBLISHED BY SONY.

ATTENTION AU COMPOSANT AYANT RAPPORT À LA SÉCURITÉ!

LES COMPOSANTS IDENTIFIÉS PAR UNE MARQUE ⚠ SUR LES DIAGRAMMES SCHÉMATIQUES ET LA LISTE DES PIÈCES SONT CRITIQUES POUR LA SÉCURITÉ DE FONCTIONNEMENT. NE REMPLACER CES COMPOSANTS QUE PAR DES PIÈCES SONY DONT LES NUMÉROS SONT DONNÉS DANS CE MANUEL OU DANS LES SUPPLÉMENTS PUBLIÉS PAR SONY.

SAFETY CHECK-OUT

After correcting the original service problem, perform the following safety check before releasing the set to the customer:
Check the antenna terminals, metal trim, "metallized" knobs, screws, and all other exposed metal parts for AC leakage. Check leakage as described below.

LEAKAGE TEST

The AC leakage from any exposed metal part to earth ground and from all exposed metal parts to any exposed metal part having a return to chassis, must not exceed 0.5 mA (500 microampers). Leakage current can be measured by any one of three methods.

1. A commercial leakage tester, such as the Simpson 229 or RCA WT-540A. Follow the manufacturers' instructions to use these instruments.
2. A battery-operated AC milliammeter. The Data Precision 245 digital multimeter is suitable for this job.
3. Measuring the voltage drop across a resistor by means of a VOM or battery-operated AC voltmeter. The "limit" indication is 0.75 V, so analog meters must have an accurate low-voltage scale. The Simpson 250 and Sanwa SH-63Trd are examples of a passive VOM that is suitable. Nearly all battery operated digital multimeters that have a 2 V AC range are suitable. (See Fig. A)

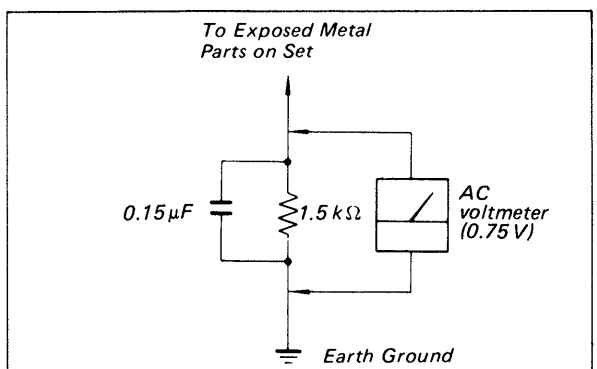


Fig. A. Using an AC voltmeter to check AC leakage.

Overview

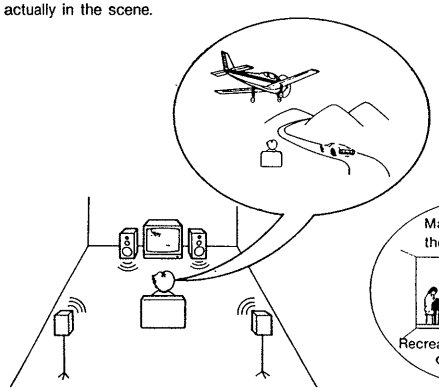
The Sony SDP-777ES digital surround processor brings all the enjoyment and excitement of a movie theater or concert hall to the home, allowing you to recreate sound just like that heard there—the surround sound experience—using your own program sources.

4 types of surround sound

The SDP-777ES recreates 4 types of surround sound: DD Dolby surround, Hall surround, Matrix surround and Simulated surround.

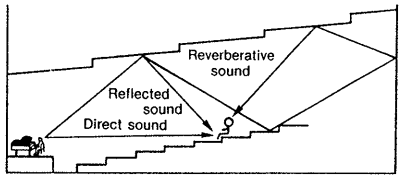
Enjoying a movie like in a theater — DD Dolby Surround—

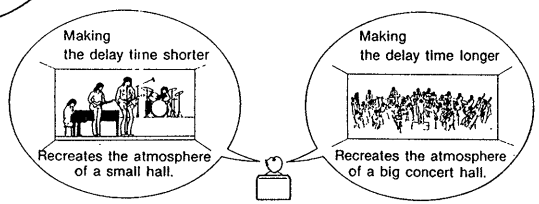
DD Dolby surround is the system used to play back the sound tracks of motion pictures with this audio process at home. This process, called DD Dolby Stereo, creates the surround sound experience in the theater.
The SDP-777ES allows you to recreate this surround sound when playing back commercially available video software with this audio process. You can identify such software by the DD DOLBY SURROUND mark on its cover or DD DOLBY STEREO mark on the end credits.
The decoder built into this unit, called the Pro-Logic Dolby surround decoder, is the same as that used in the movie theater. This decoder reproduces sound, enhancing directional accuracy of the sound field(3 dB channel separation at worst in the conventional Dolby surround decoder becomes 25 dB or more in this Pro-Logic surround decoder.): it brings moving effect from the moving sources, for example, from the right to the left, or from the front to the back. You will feel as if you were actually in the scene.



Improving the acoustics of your room —Hall Surround—

The sound you hear in a concert hall consists of a direct sound, a reflected sound and a reverberative sound which reache you later than the direct one. The acoustics of a room affect the way these three sounds are heard.
The Hall Surround circuits built in this unit can recreate sound of a concert hall, by reproducing the direct sound from the front and the reverberative sound from the back. This unit also allows you to recreate the acoustics appropriate to your program sources, by adjusting the time the reverberative sound reaches you. This time is called "Delay time" (see "Creating a sound space of the desired size on page 20.)




Making the delay time shorter
Recreates the atmosphere of a small hall.
Making the delay time longer
Recreates the atmosphere of a big concert hall.

Reverberating the sound—Matrix Surround—

The Matrix Surround circuits recreate a hard-diving sound that causes everything around you to vibrate. When playing back program sources such as rock music using this Matrix Surround, you can feel as if you ware present at the center of a live stage performance.

Giving stereo effect to monoaural sources —Simulated Surround—

The Simulated Surround mode gives a stereo effect to monaural sound sources, by recreating sound reflected from various directions with the delay time digitally processed.
You can give monaural pieces such a "live" feeling.

Other Features

Digital delay signal processing

The input signals are digitally processed, resulting in little deterioration in signal quality, wider dynamic range and frequency response and lower harmonic distortion than those when processed by analog delay.

Function as an AV selector

Equipped with the following inputs/outputs

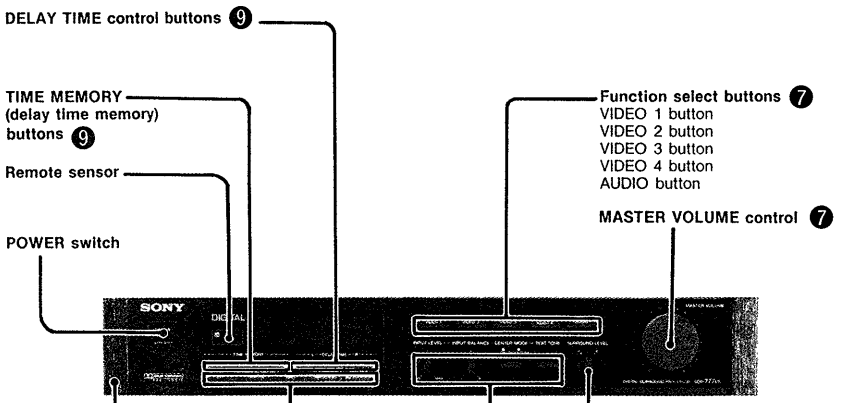
1 audio inputs	for audio program source
2 audio/video inputs/outputs	for conventional VTRs (VCRs)
2 audio/video inputs	for video program sources such as a playback only VTR(VCR) or video disc player
1 video output	for a monitor TV
2 S video inputs/outputs	for VTRs(VCRs) with S video inputs/outputs
1 S video output	for a monitor TV with S video input

Remote commander supplied

The supplied remote commander has almost all the same controls as the SDP-777ES main unit. It enables you to select the desired type of surround sound or to adjust the surround level or delay time to your preference at the listening position.

Parts Identification ---Refer to the pages indicated in ● for details.

Front Panel of the Main Unit

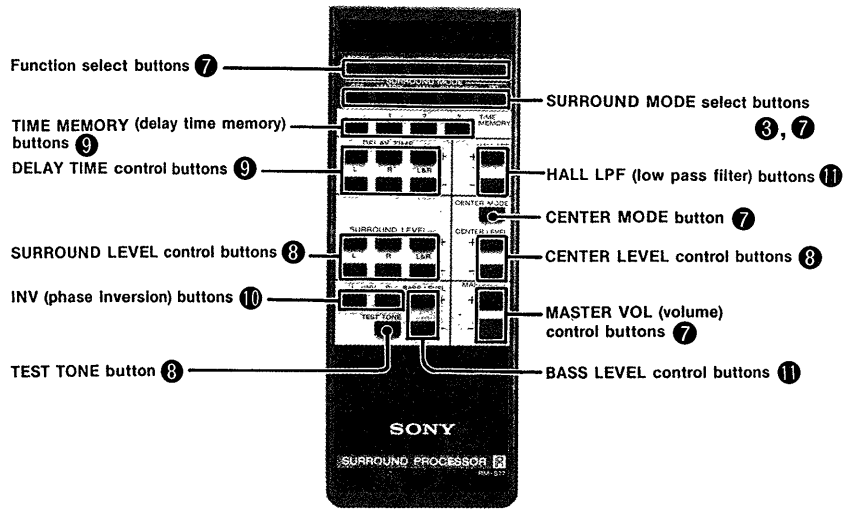


Before removing the side woods

In order to install the unit in a certain space, etc. you can remove the side woods.

1 Disconnect the AC power cord of the processor.
2 Remove the screws which fix the side woods.
3 Fasten the supplied screws (M4 × 4) there.

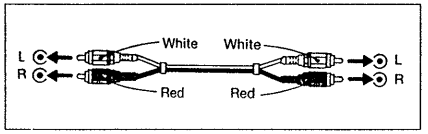
Remote Commander (supplied)


Function select buttons 7
TIME MEMORY (delay time memory) buttons 9
DELAY TIME control buttons 9
SURROUND LEVEL control buttons 8
INV (phase inversion) buttons 10
TEST TONE button 8
SURROUND MODE select buttons 3, 7
HALL LPF (low pass filter) buttons 11
CENTER MODE button 7
CENTER LEVEL control buttons 8
MASTER VOL (volume) control buttons 7
BASS LEVEL control buttons 11
SONY
SURROUND PROCESSOR

Connecting the system

Connection Notes

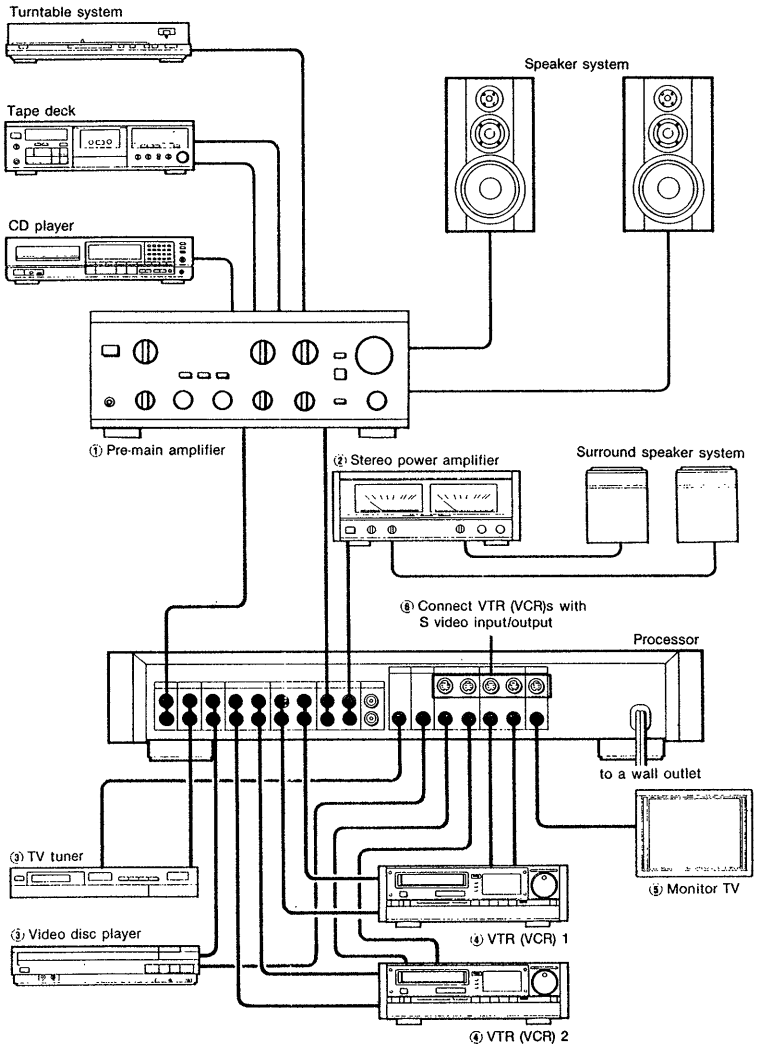
- Turn off the power to all equipment before making any connection.
- The connecting cords should be fully inserted into the jacks. A loose connection may cause hum pick-up.
- Cord plugs and jacks are color coded. Red plugs and jacks are for right channel (R) and white ones for left channel (L).



Connection diagram for the basic system

To reproduce the surround sound from the surround speaker system, a stereo power amplifier (or a pre-main amplifier) is required in addition to your stereo system using a pre-main amplifier.

The numbers placed in a circle correspond to those of the individual connecting diagrams given on the following pages.



When the program source equipment is connected to the amplifier, do the following.

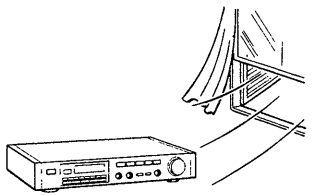
1) Set the ADAPTOR or TAPE MONITOR switch of the amplifier to ON.
2) Select the program source to be played with the REC OUT (or INPUT) selector.

Installing the system

Installing the unit

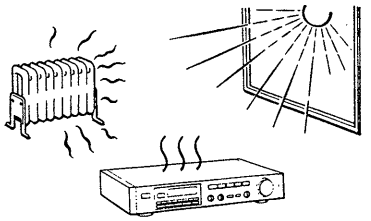
Place the unit in a location with adequate air circulation to prevent internal heat build-up in the unit.

This way.



Do not place the unit on a soft surface, such as a rug that would block the ventilation holes on the bottom.

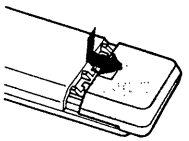
Not this way.



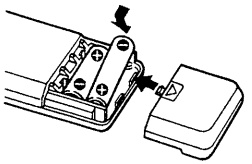
Do not install the unit:
—near heat sources such as radiators or air ducts.
—in a place subject to direct sunlight, excessive dust, mechanical vibration or shock.
—in an inclined position.

Installing the batteries in the supplied remote commander

1



2



Two R6 (size AA) batteries

Do not throw away the carton and the packing material!
They make an ideal container when transporting the unit or shipping it for servicing.

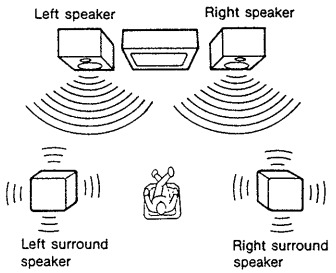
To avoid damage caused by battery leakage and corrosion
When the commander will not be used for a long time, remove the batteries.

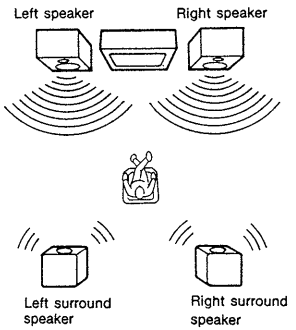
Battery life
About a half a year of normal operation can be expected when using the Sony SUM-3(NS) batteries.
When the batteries run down, the remote commander will not operate the unit. In this case, replace the batteries with new ones.

Positioning the Speakers

Speaker location depends on the size or acoustics conditions of the room where the system is installed. The figures below are just examples. We recommend that you experiment to find the speaker direction or location in which the most effective surround sound can be obtained.

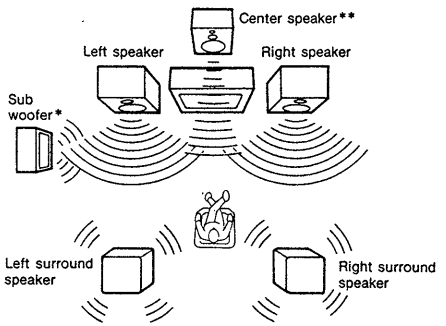
For a basic surround sound system—4 speakers are required.





For a full-scale surround sound system

A center speaker and/or a sub woofer speaker are required in addition to the basic 4 speakers.

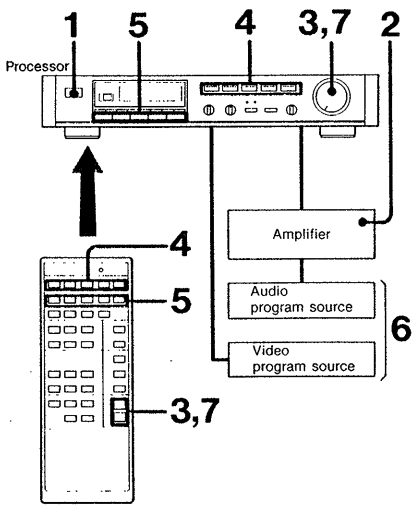


On speaker affinity
To enjoy surround sound effect at its best, you should use the same type of speakers for front, center and surround.
If this is impossible, use speakers with the similar tone color.

*** Positioning a subwoofer**
You can position a subwoofer anyhwere in the room as the human ear is not so sensitive about the direction the bass comes from.

**** A small size center speaker can be used**
The processor reproduces the bass sound of the center channel from the front L and R speakers so that a small center speaker can also be used.
The small size center speaker is especially convenient as it can be installed near the monitor.

Start playing the program sources throuth the processor



1 **Turn on the processor and the connected equipment.**

2 **Set the amplifier volume to a higher level than normal.**

3 **Turn MASTER VOLUME completely down.**

4 **Select a program source.**

Function selectors	Source equipment
VIDEO 1	VTR(VCR) connected to VIDEO 1 inputs/outputs
VIDEO 2	VTR(VCR) connected to VIDEO 2 inputs/outputs
VIDEO 3	Video disc player or TV tuner connected to VIDEO 3 or 4, respectively
VIDEO 4	
AUDIO	Audio program source equipment connected to AUDIO inputs

5 **Select the desired surround mode** (see "Overview" on page 4).
If you do not want any surround effect, press OFF.

6 **Play the program source.**

7 **Adjust MASTER VOLUME.**

To enjoy simultaneously audio and video of different equipment
Select a video equipment with one of the function selectors, and then press AUDIO.
For example, viewing a video of a VTR(VCR) while listening to CD at the same time is possible.

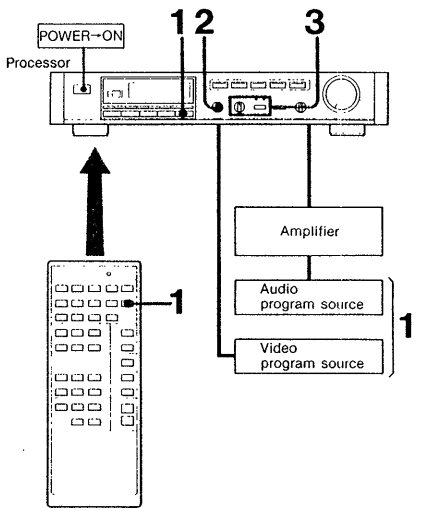
The sound heard from the speakers
- When the OFF surround mode is selected, no sound will be heard from the surround speakers.
- When a surround mode other than ▯▯ SURROUND is selected, no sound will be heard from the center speaker.

Adjusting the level of the system

For maximum enjoyment of the surround sound, make the following preparations.
- Adjust the input level and input balance (necessary for Dolby surround mode).
- Adjust the speaker level(necessary for all kinds of surround mode).

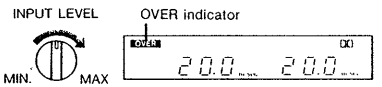
Adjusting the input level and input balance (for Dolby surround mode)

When playing a Dolby processed video tape or video disc, adjusting the input level and balance is necessary to obtain the best surround effect.



1 **Start playing the program source and press ▯▯ SURROUND.**

2 **Adjust the input level** by turning INPUT LEVEL clockwise as far as possible but not so far that at the highest level the OVER indicator is displayed.



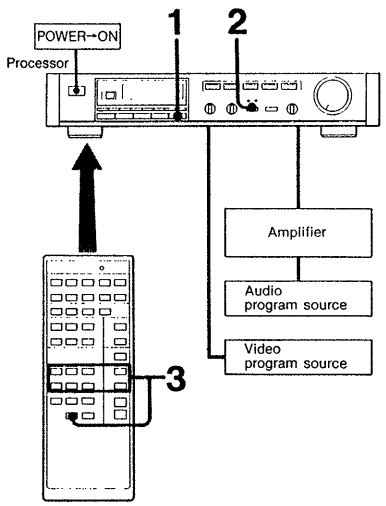
3 **Adjust the input balance of the right and left speakers.**
1) Press CENTER MODE to deactivate the center-channel signals (both the ON and PHANTOM indicators disappear).
2) Use a dialogue part of a source and turn INPUT BALANCE so that the output level of the right and left signals is set to the minimum.

Even if your video software does not have ▯▯ DOLBY STEREO or ▯▯ DOLBY SURROUND mark
Adjust the input level and input balance, as some commercially available software may have Dolby surround processed sound tracks even though it is not indicated on the package.

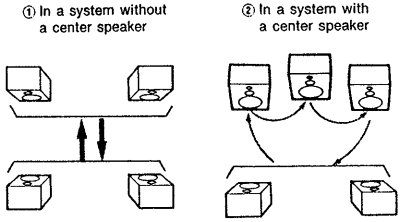
Adjusting the level of the system

Adjusting the speaker level (necessary for all kinds of surround mode)

To enjoy the surround sound to the maximum on playing any program sources, adjust the level of the front, surround and center (if connected) speakers to the same.
The adjustment must be done in the Dolby surround mode, but the level once adjusted can be used for all kinds of the surround mode.



Test tone you will hear



1 **If ▯▯ indication is not displayed, press ▯▯ SURROUND.**

2 **Press CENTER MODE** according to whether a center speaker is connected or not.

In a system with a center speaker	Press so that the ON indicator lights.
In a system without a center speaker	Press so that the PHANTOM indicator lights.

3 **Adjust the speaker level.**

① In a system without a center speaker

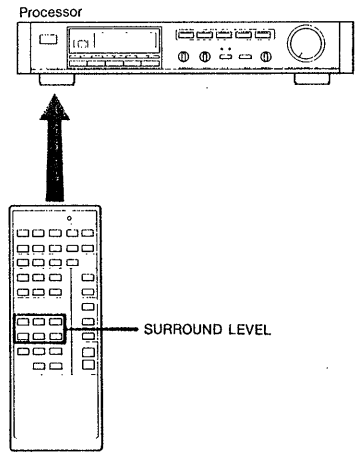
1) Press TEST TONE.
The test tone will be output automatically from the front and surround speakers alternatively with a level changed in 2 dB step.
2) For fine adjustment, press SURROUND LEVEL + or – of the remote commander at the listening position.
3) At the listening position, press TEST TONE again when the sound level from both the front and surround speakers is the same.

② In a system with a center speaker

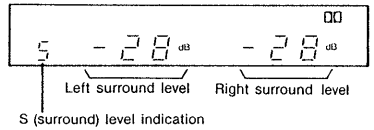
1) Press TEST TONE.
The test tone will be output automatically from the L front, center, R front and surround speakers in succession.
2) Press SURROUND LEVEL and CENTER LEVEL of the remote commander so that the volume level from each speaker(s) is same.
3) Press TEST TONE again to turn it off.

Adjusting the surround level more effectively

Although you may have already adjusted the speaker level as described on page 18, you can enjoy more effective surround sound in some video software by increasing or decreasing the level of the surround speakers.



At the listening position, press SURROUND LEVEL + or – of the remote commander to the level in which the best surround effect is obtained according to the program source or the position where the listener is.
To adjust the left surround speaker level, press L (+ or –).
To adjust the right surround speaker level, press R (+ or –).



Even if your video software was not Dolby surround processed
You can enjoy surround sound effect by adjusting the speaker level described on page 18.

Adjustable range of the surround level
The surround level can be adjusted by 1 dB in 81 steps in the range of – ∞ dB at the minimum to 0 dB at the maximum.

Creating a sound space of the desired size—Using delay time

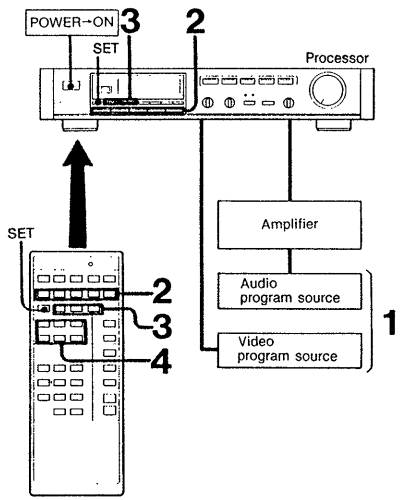
The sound you hear in a concert hall consists of a direct sound, as well as a reflected sound and a reverberative sound which reach you later than the direct one. The delay time is the time these sounds reach you and varies according to the acoustics and the size of a hall.
To recreate the acoustics of a hall, this processor slightly delays sounds from the surround speaker system in comparison with sounds from the front speaker system.
You can suggest the size of a concert hall by adjusting the delay time; — a longer delay time suggests a larger concert hall.
So, adjust the delay time, taking into account the size of the hall where the source was actually recorded.
Refer to the table below for the recommended delay times to be used with various program sources.

Recommended delay time

Program source	Delay time
symphony, orchestral music, opera	25–40 msec
chamber music	20–30 msec
jazz, rock music, popular music	10–25 msec

Selecting the delay time preset at the factory

3 delay time appropriate to each surround mode have been preset at the factory.



1 **Play the program source** (see page 16).

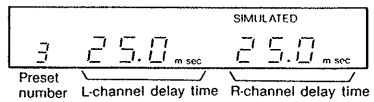
2 **Select the desired surround mode.**

3 **Select the desired factory preset delay time.**

Surround mode	TIME MEMORY buttons		
	1	2	3
MATRIX	0.1	0.1	10.0
HALL	20.0	30.0	40.0
SIMULATED	5.0	15.0	25.0
□□ SURROUND	10.0	20.0	30.0

(Factory preset time) (msec.)

4 For fine adjustment, **press + and – DELAY TIME L&R** of the remote commander.
The factory preset delay time will be erased.

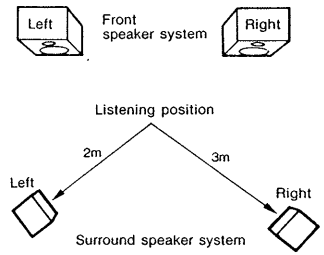


Tips on adjusting the delay time

Adjusting the delay time so there is slight difference L and R causes the following effect:
- Corrects the distance between the front speaker system and you. You may feel you are at the same distance from the L and R surround speakers, even though you are not actually at the same distance from each of them.

Ex. When the difference of the distance between you and the left and right surround speaker is 1 m, adjust the right delay time to 20 msec. and the left one to 22.9 msec.
(The sound advances 1 m for every 2.9 msec.)

- Recreates a sound field just like a concert hall.
An approximately 5 to 10 msec difference between the L and R delay time gives a more "live feeling" to the surround sound than that when the L and R delay time is the same.



To adjust the different L and R delay time

You can do this adjustment either with the processor or the remote commander.
To adjust the time of the L channel: press + and – of the DELAY TIME L.
To adjust the time of the R channel: press + and – of the DELAY TIME R.

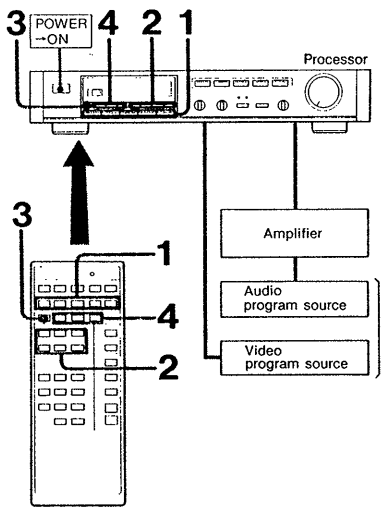
The range of the delay time to be adjusted
The delay time can be changed from the 0.1 msec. to 80.0 msec. (10.0 msec. to 30.0 msec. for Dolby surround) with L and R separatedly.

To reset to the delay time preset at factory
While pressing SET, press TEST TONE. The adjusted delay time will be replaced by the factory preset time. Note that at the same time, the surround mode will be set to Dolby surround, the function to VIDEO 1 and the surround and center speaker level to – 10 dB.

Making the most out of the surround sound

Memorizing the delay time

Up to 12 types of delay time (3 for each surround mode) can be memorized.



1 Select the desired surround mode.

2 Adjust the desired delay time.

3 Press SET.
The MEMORY indicator appears in the display window.

4 While MEMORY is displayed, press one of TIME MEMORY (1 to 3).
The displayed delay time has been memorized to the selected number.

To select the memorized delay time

1 Select the surround mode.

2 Press TIME MEMORY (1 to 3) to which the desired delay time has been memorized.

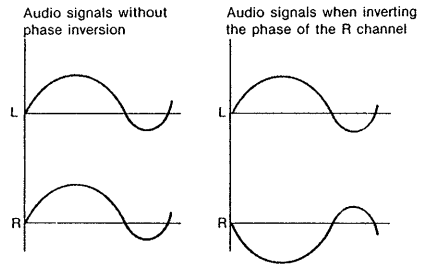
If the MEMORY indicator disappears
Press SET again.

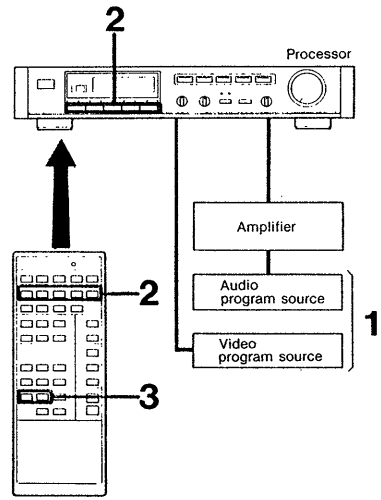
To check the memorized delay time
Select the surround mode and then press the TIME MEMORY number (1-3) to which the delay time has been memorized.

To clear the memorized delay time
Memorize a new delay time on a TIME MEMORY number or reset to the factory preset delay time. (see page 21).

Giving an expansiveness to the sound field—Inverting the phase

Effect when inverting the phase
Inverting phase of either L or R channel produces a difference in phase between L and R channels, resulting in more expansive sound field.

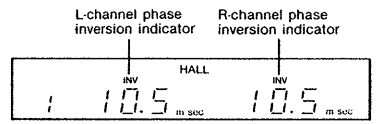




1 Play the program source.

2 Select the desired surround mode.

3 Press L or R of INV of the remote commander.

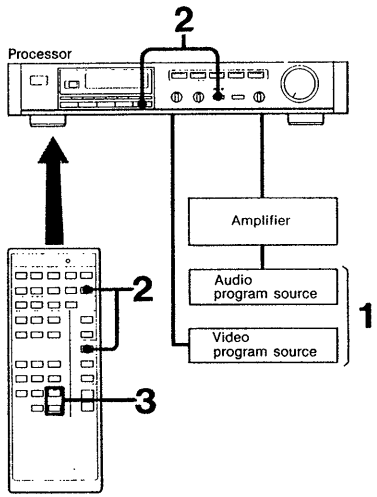


To restore to the original sound
Press the L or R of INV again so that the INV indicator dissappears.

Making the most out of the surround sound

Adjusting the bass sound (Dolby surround only)

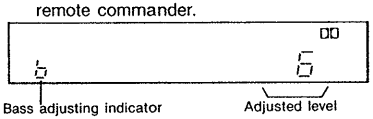
Boosting the bass sound gives a dynamic and powerful sound which is desirable for science fiction movies or films in which the musical score has a major part. Reducing the bass sound makes it easier to hear the dialogue.
You can adjust the bass sound to the desired level from –10 at the minimum to 10 at the maximum in the Dolby surround mode.



1 Play the program source.

2 Select Dolby surround and press CENTER MODE so that either ON or PHANTOM indicator appears.

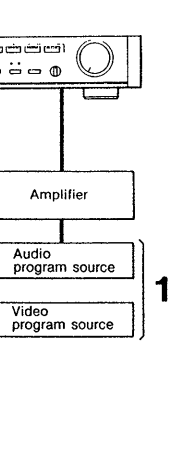
3 Press + or – BASS LEVEL of the remote commander.



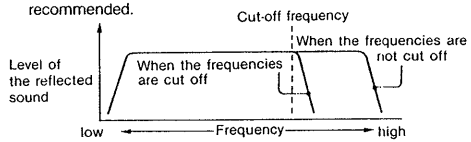
Speaker whose bass is to be adjusted
You can adjust only the bass sound of the L and R front speakers.

Reproducing only the selected frequencies and lower (Hall surround only)

In a concert hall, the direct sound is heard as it is. The reflected sound is heard with high frequencies reduced a little bit so that the sound with high frequencies do not reverberate too much.
This processor allows you to recreate the sound with this characteristics, by reproducing only the selected frequencies (cut-off frequency) and lower of the reflected sound.



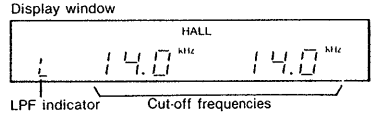
The factory preset cut-off frequency is 7 kHz, which is recommended.



1 Play the program source.

2 Select Hall surround.

3 Press + or – of HALL LPF* to adjust the cut-off frequency.**



*** What is the LPF (low pass filter)?**
The low pass filter is a kind of a filter which passes only the sound below the adjusted frequency. You can recreate the desired acoustics of a hall by adjusting this frequency(cut-off frequency).

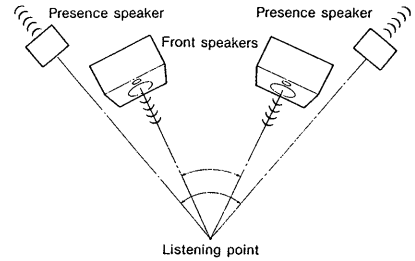
**** Adjustable range of the cut-off frequency**
The cut-off frequency can be changed from 1.0 kHz to 16.0 kHz in 1-kHz steps.
The indication "—kHz" shows that the signals do not pass through the LPF.

Giving presence to music —Presence delay

The presence delay circuit built in this processor allows you to feel a sense of richness and expansiveness when playing music source.

Positioning the speakers

The speakers used as surround speakers should be placed near the front speakers and facing the wall to get sound reflection from many directions (presence speakers).



To give presence to music

While pressing TIME MEMORY SET, press HALL of the processor. To release the presence delay mode, press one of SURROUND MODE.
You cannot activate this mode with the remote commander.

Giving "live feeling" to music —Stereo reverberator

The stereo reverberator circuit built into the processor recreates sound like that of a live house which is full of the reverberative sound.

To give "live feeling" to music

While keeping TIME MEMORY SET pressed, press SIMULATED of processor. To release the stereo reverberator mode, press one of SURROUND MODE button.
You cannot activate this mode with the remote commander.

SECTION 2
ELECTRICAL ADJUSTMENTS

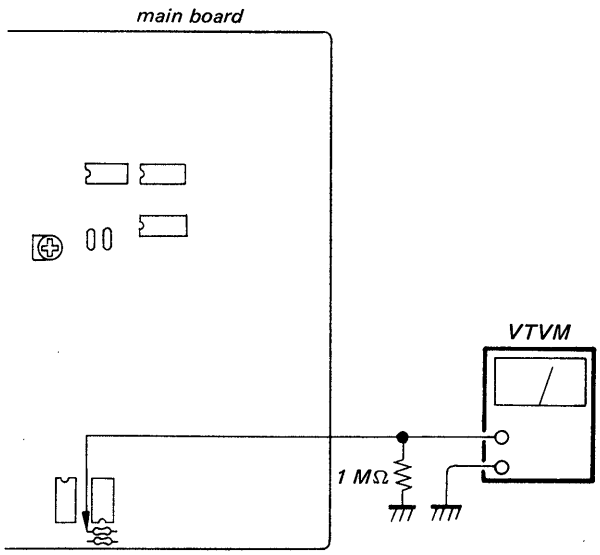
A/D Offset Adjustment

Make this adjustment when noise occurs at the LINE OUT connector on the rear panel during switch selection.

Setting:

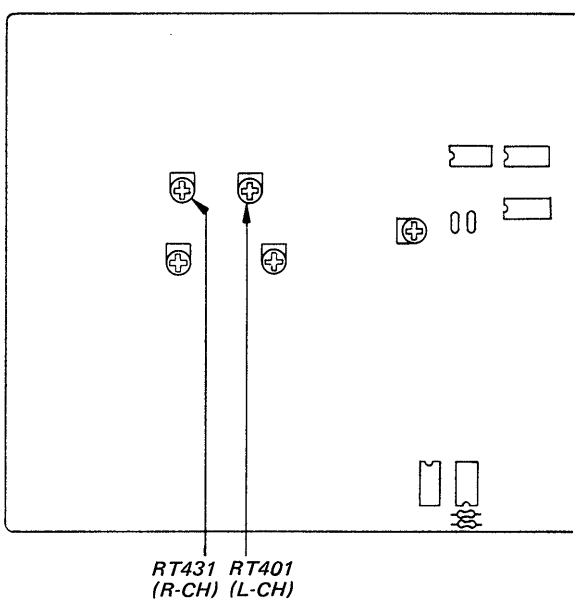
SURROUND switch: ON

Procedure:



1. Connect VTVM to the test point and adjust RT401 (L-CH) so that the VTVM reads 0 ±0.1 V.
2. Press the HALL button while pressing the SET button. (*Presence delay mode)
3. Adjust RT431 (R-CH) so that the VTVM reads 0 ±0.1 V.

Adjustment Location: main board



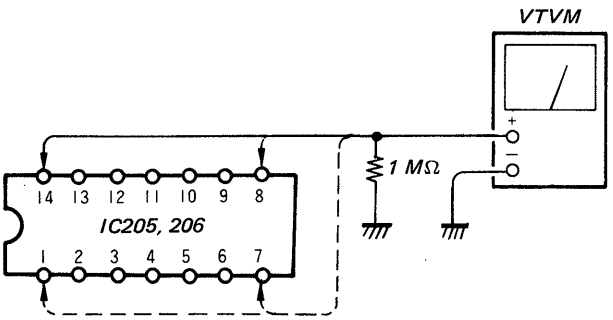
VCA Offset Adjustment

Make this adjustment when a transient input signal is supplied in the Dolby surround mode and when noise occurs at the LINE OUT connector on the front panel.

Setting:

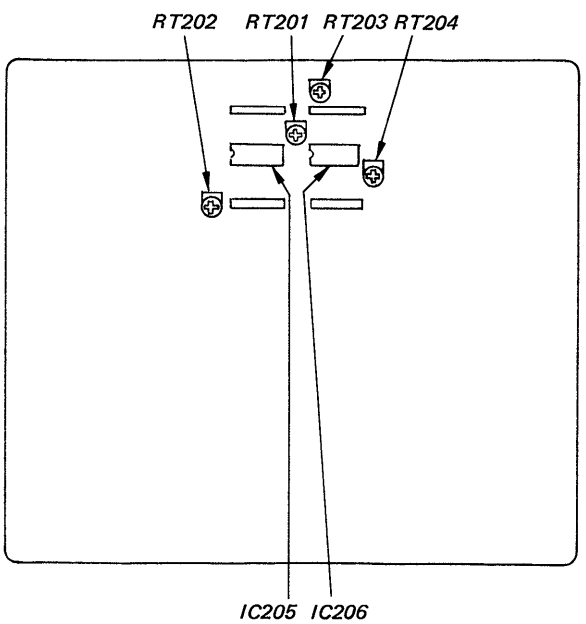
SURROUND switch: ON
AUDIO input: None

Procedure:



- Adjust RT201 so that pins (8) and (14) of IC205 are within 0 ±50 mV.
- Adjust RT202 so taht pins (1) and (7) of IC205 are within 0 ±50 mV.
- Adjust RT203 so that pins (8) and (14) of IC206 are within 0 ±50 mV.
- Adjust RT204 so that pins (1) and (7) of IC206 are within 0 ±50 mV.

Adjustment Location: main board



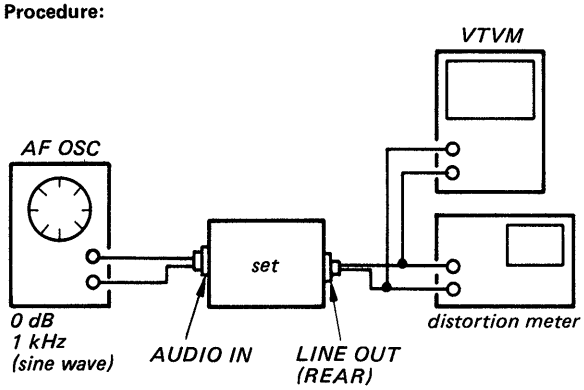
* The presence delay mode indicates that a delayed sound is output from the surround speaker.

Distortion Factor Adjustment

Setting:

DD SURROUND switch: ON

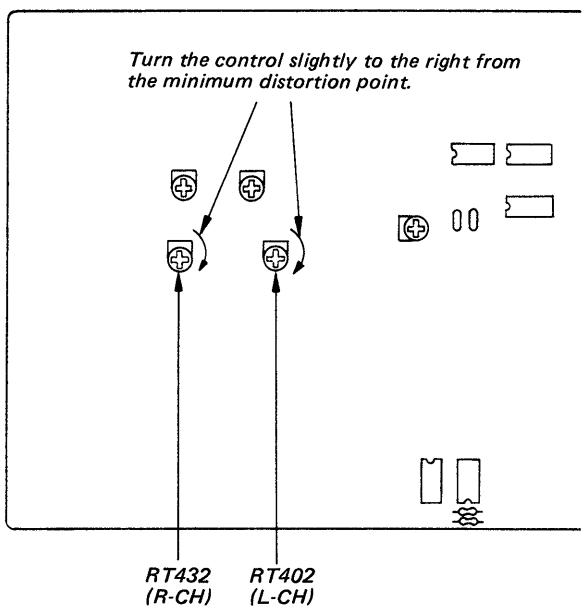
Procedure:



1. Press the AUDIO button (function button).
2. Press the HALL button while pressing the SET button (presence delay mode).
3. Turn the SURROUND level control to the plus (+) position and adjust so that the VTVM reads 0 dB.
4. Adjust RT402 (L-CH) and RT432 (R-CH) so that the distortion factor is minimized.

Specification: 0.025%

Adjustment Location: main board



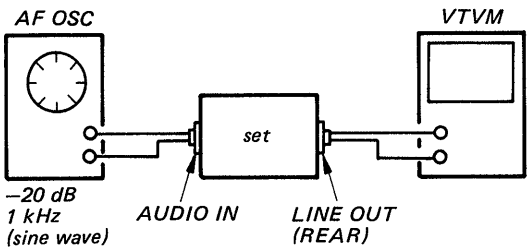
Surround Null Adjustment

Make this adjustment when an L + R (monaural) signal leaks from the LINE OUT connector on the rear panel in the Dolby mode.

Setting:

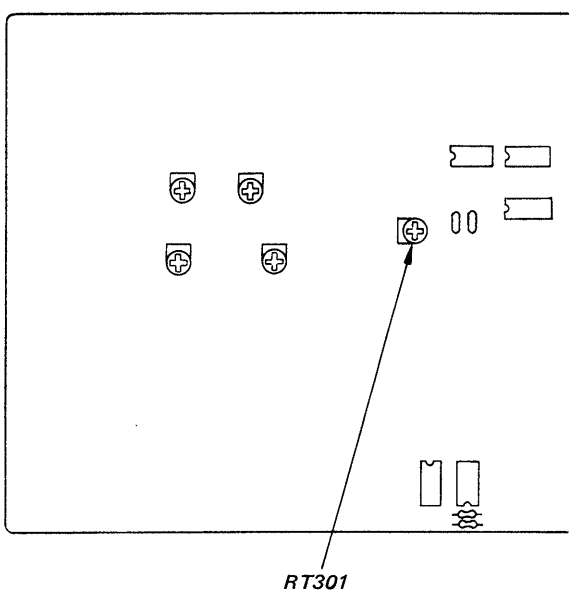
DD SURROUND switch: ON
INPUT level control: MAX
INPUT balance control: CENTER

Procedure:



1. Press tha AUDIO button (function button).
2. No adjustment is required when VTVM reading is less than –25 dB.
   Make the next adjustment when VTVM reading is more than –25 dB.
3. Adjust RT301 so that VTVM reading is less than –40 dB.

Adjustment Location: main board

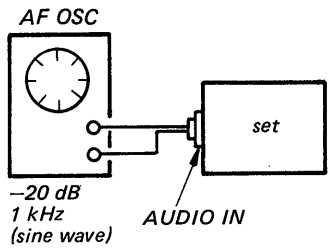


Prologic Block Operation Check

Setting:

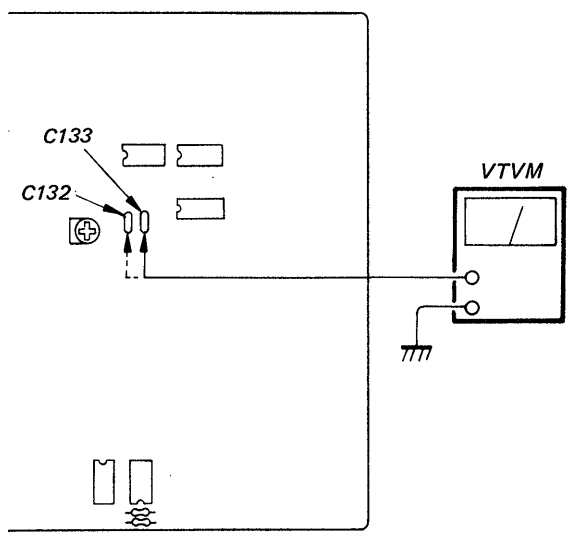
DD SURROUND switch: ON
INPUT level control: MAX
INPUT balance control: CENTER

Procedure:



1. Connect an AF oscilloscope to AUDIO IN (L-CH).
2. Check that the value at the test point of C132 is +3.0 ±0.5 V.
3. Connect an AF oscilloscope to AUDIO IN (R-CH).
4. Check that the value at the test point of C133 is –3.0 ±0.5 V.
5. Connect an AF oscilloscope to AUDIO IN (L-CH, R-CH).
6. Check that the value at the test point of C133 is –3.0 ±0.5 V.

Adjustment Location: main board



SECTION 3
DIAGRAMS

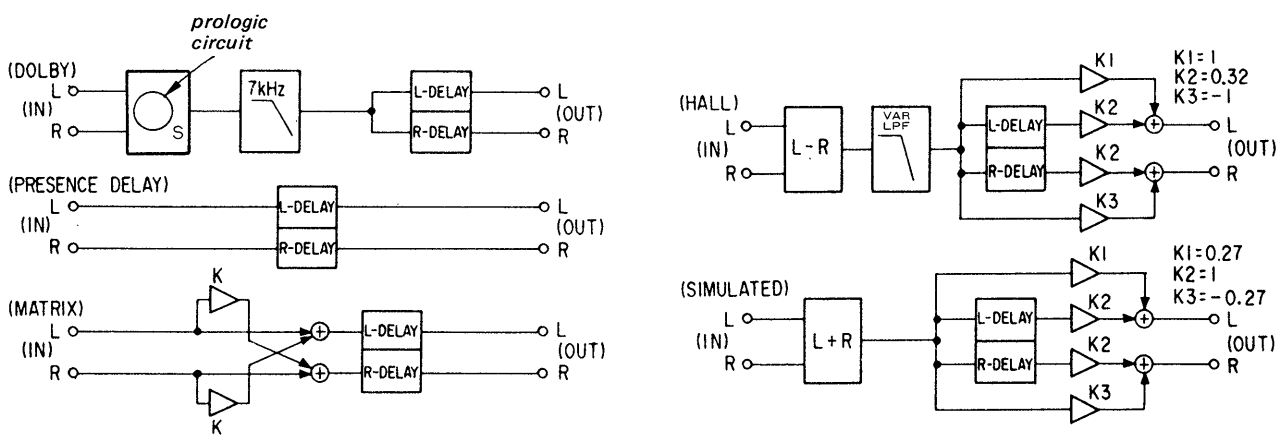
Pin Function of CXD1079Q (IC454) Digital Signal Processor IC

The control program of digital signal processor IC454 is transferred from microcomputer IC460. The signal from an A/D IC (IC451) is serial-to-parallel converted using IC454, sent to the external RAM (consisting of IC452 and IC453), and accessed after the required delay time. Matrix processing and filtering are then done, and the resultant signal is sent to the D/A IC (IC456).

<table>
<tr><th>Pin No.</th><th>Pin Name</th><th>I/O</th><th>Description</th></tr>
<tr><td>1</td><td>D0</td><td>I/O</td><td>External RAM and latch data input and output.</td></tr>
<tr><td>2 to 5</td><td>$\overline{IN\ 0}$ to $\overline{IN\ 3}$</td><td>O</td><td>16-bit parallel input strobe signal from external latch circuit (active low).</td></tr>
<tr><td>6 to 9</td><td>$\overline{OUT\ 0}$ to $\overline{OUT\ 3}$</td><td>O</td><td>16-bit parallel output strobe signal to external latch circuit (active high).</td></tr>
<tr><td>10</td><td>D-DIR</td><td>O</td><td>External latch circuit's bidirectional buffer direction signal. The same signal as $\overline{IN\ 0}$ through $\overline{IN\ 3}$ is output in the input mode.</td></tr>
<tr><td>11</td><td>ADRS-P</td><td>O</td><td>16-bit parallel port extension signal.</td></tr>
<tr><td>12 to 27</td><td>A0 to A15</td><td>O</td><td>External RAM address output (A0: LSB). A7 through A0 are used when the D-RAM is connected.</td></tr>
<tr><td>28</td><td>$\overline{OE}$</td><td>O</td><td>External RAM $\overline{OE}$ signal.</td></tr>
<tr><td>29</td><td>$\overline{WE}$</td><td>O</td><td>External RAM $\overline{WE}$ signal.</td></tr>
<tr><td>30</td><td>$\overline{RAS}$</td><td>O</td><td>D-RAM $\overline{RAS}$ signal output.</td></tr>
<tr><td>31</td><td>CAS</td><td>O</td><td>D-RAM $\overline{CAS}$ signal output.</td></tr>
<tr><td>32</td><td>VDD</td><td>–</td><td>Positive (+) power supply (+4.5 to 5.5 V) (with VSS as reference). Shorted externally at pin 64.</td></tr>
<tr><td>33</td><td>$\overline{M\text{-}CLK}$</td><td>O</td><td>External IC clock output.</td></tr>
<tr><td>34</td><td>$\overline{MCK\text{-}OUT}$</td><td>O</td><td>Crystal oscillator output.</td></tr>
<tr><td>35</td><td>$\overline{MCK\text{-}IN}$</td><td>I</td><td>Crystal oscillator input or external clock input.</td></tr>
<tr><td>36</td><td>S-MODE</td><td>I</td><td>External RAM mode selection.
H: S-RAM; L: D-RAM</td></tr>
<tr><td>37</td><td>ADS-A</td><td rowspan="3">I</td><td rowspan="3">RAM word selection pin (six modes)
<table>
<tr><th></th><th>2K</th><th>4K</th><th>8K</th><th>16K</th><th>32K</th><th>64K</th></tr>
<tr><td>ADS-A</td><td>H</td><td>L</td><td>H</td><td>L</td><td>H</td><td>L</td></tr>
<tr><td>ADS-B</td><td>L</td><td>L</td><td>H</td><td>H</td><td>L</td><td>L</td></tr>
<tr><td>ADS-C</td><td>H</td><td>H</td><td>L</td><td>L</td><td>L</td><td>L</td></tr>
</table></td></tr>
<tr><td>38</td><td>ADS-B</td></tr>
<tr><td>39</td><td>ADS-C</td></tr>
<tr><td>40</td><td>BKS-A</td><td rowspan="4">I</td><td rowspan="4">Selection pin determining the number of bit clocks
<table>
<tr><th>Number of blocks</th><th>34</th><th>36</th><th>38</th><th>40</th><th>42</th><th>44</th><th>46</th><th>48</th><th>50</th><th>52</th><th>54</th><th>56</th><th>58</th><th>60</th><th>62</th><th>64</th></tr>
<tr><td>BKS-A</td><td>L</td><td>H</td><td>L</td><td>H</td><td>L</td><td>H</td><td>L</td><td>H</td><td>L</td><td>H</td><td>L</td><td>H</td><td>L</td><td>H</td><td>L</td><td>H</td></tr>
<tr><td>BKS-B</td><td>L</td><td>H</td><td>H</td><td>L</td><td>L</td><td>H</td><td>H</td><td>L</td><td>L</td><td>H</td><td>H</td><td>L</td><td>L</td><td>H</td><td>H</td><td>L</td></tr>
<tr><td>BKS-C</td><td>L</td><td>H</td><td>H</td><td>H</td><td>H</td><td>L</td><td>L</td><td>L</td><td>L</td><td>H</td><td>H</td><td>H</td><td>H</td><td>L</td><td>L</td><td>L</td></tr>
<tr><td>BKS-D</td><td>L</td><td>H</td><td>H</td><td>H</td><td>H</td><td>H</td><td>H</td><td>H</td><td>H</td><td>L</td><td>L</td><td>L</td><td>L</td><td>L</td><td>L</td><td>L</td></tr>
</table></td></tr>
<tr><td>41</td><td>BKS-B</td></tr>
<tr><td>42</td><td>BKS-C</td></tr>
<tr><td>43</td><td>BKS-D</td></tr>
<tr><td>44</td><td>EX-MODE</td><td>I</td><td>16-bit x2 serial data transfer mode selection pin.
LR-CLK and DAB-CLK signals are input when H.
LR-CLK and DAB-CLK signals are output when L.</td></tr>
<tr><td>45</td><td>VSS</td><td>–</td><td>Power supply ground.
Shorted externally at pin 80.</td></tr>
<tr><td>46</td><td>TEST-CK</td><td>I</td><td>Test terminal. Held low when this IC is used.
Data address counter clock input.</td></tr>
<tr><td>47</td><td>TEST-R</td><td>I</td><td>Test terminal. Held low when this IC is used.
Data address counter reset input.</td></tr>
<tr><td>48</td><td>DA-OUT</td><td>O</td><td>16-bit x2 serial data (digital audio stereo signal) output.</td></tr>
</table>

Pin No.	Pin Name	I/O	Description
49	DAB-CLK	I/O	DA-OUT sending bit clock. DA-OUT data changes at the trailing edge of this signal.
50	W-CLK	O	Word clock signal.
51	LR-CLK	I	Sampling frequency clock. L-CH is transferred when H; R-CH is transfered when L.
52	ADB-CLK	O	AD-IN data loading clock output. Data is loaded every bit at the trailing edge of this clock.
53	AD-IN	I	16-bit x2 serial data (digital audio stereo signal) input.
54	NC	–	Not wired internally (floating terminal). Be careful of the floating capacitance at adjacent pins 53 and 55 when the signal line is connected.
55	DATA-P	O	A high signal is output during data access.
56	OVF16	O	A high signal is output when the internal 16-bit clip circuit is activated.
57	OVF22	O	A high signal is output when the internal 22-bit data overflows.
58	ZERO-P	O	A high signal is output during zero instruction execution.
59	MUTE	I	DA-OUT is set low and muted (active high).
60	$\overline{\text{PRG-L}}$	I	Serial input PRG-T data is transferred to the latch circuit in parallel. Transferred when L, latched when H.
61	PRG-DT	I	Microprogram transfer serial data input.
62	PRG-CK	I	Microprogram transfer clock input. PRG-DT data is loaded at the leading edge of this signal.
63	F-MODE	I	Transfer to the program RAM is inhibited, and data access is enabled during zero instruction execution.
64	VDD	–	Positive (+) power supply (+4.5 to +5.5 V with VSS as reference). Externally shorted at pin 32.
65 to 79	D0 to D15	I/O	External RAM and latch data input and output.
80	VSS	–	Power supply ground. Externally shorted at pin 45.

Appended Figure



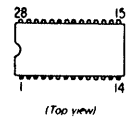
Each digital signal processing in SDP-777ES's mode

Pin Function of μPD75206-045 (IC460) System Control's Microcomputer

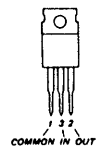
Pin No.	Pin Name	I/O	Description
1 to 4	S3 to S0	O	Segment signal output and key matrix signal output terminals.
5	POWER ON/OFF	I	Power detection terminal. Goes high during power on sequence.
6	CLK	O	Clock signal output terminal when serial data is transferred to digital signal processor IC CX7079Q (IC454).
7	DATA	O	Serial data output terminal to digital signal processor IC CX7079Q (IC454).
8	GND	–	Ground terminal.
9	SIRCS	I	Remote control signal input terminal.
10	OVER	I	OVER indication signal input terminal. Goes high when the OVER indicator lights.
11, 12	GND	–	Ground terminal.
13	CE	O	Latch circuit output terminal to digital signal processor IC CX7079Q (IC454).
14	CLK	O	Clock signal output terminal when serial data is transferred to electronic volume control IC LC7535 (IC209 and IC214).
15	DATA	O	Serial data output terminal to electronic volume control IC LC7535 (IC209 and IC214).
16	CE	O	Latch circuit output terminal to electronic volume control IC LC7535(IC209 and IC214).
17 to 20	VIDEO 1 to VIDEO 4	O	Audio signal selection signal output terminal in VIDEO 1 through VIDEO 4. Goes low when VIDEO 1 through VIDEO 4 are selected.
21 to 24	K0 to K3	I	Key matrix signal input terminal.
25 to 28	VIDEO 1 to VIDEO 4	O	Video signal selection signal output terminal in VIDEO 1 through VIDEO 4. Goes low when VIDEO 1 through VIDEO 4 are selected.
29	MUTE	O	Muting signal output terminal. Goes low during muting.
30	X1	I	Clock oscillator circuit input terminal.
31	X2	O	Clock oscillator circuit output terminal.
32	VSS	–	Ground terminal.
33	GND	–	Ground terminal.
34	NC	–	No connection.
35	AUDIO	O	AUDIO indicator signal output terminal. Goes low when the AUDIO indicator lights.
36	AUDIO	O	AUDIO signal selection signal output terminal. Goes low when AUDIO is selected.
39	$\overline{\text{RESET}}$	I	Reset input terminal. Goes low during reset.
40 to 48	T0 to T8	O	Digit signal output terminal.
49	NC	–	No connection.
50	DOWN	O	Motor control signal output terminal. Goes high when is down.
51	UP	O	Motor control signal output terminal. Goes high when is up.
52 to 54	TEST TONE 3 to TEST TONE 1	O	Test tone selection signal output terminal. Only pin 54 goes high during test tone.
55	DOLBY	O	Dolby surround signal selection output terminal. Goes high during Dolby surround.
56	VLOAD	I	Display indicator's negative voltage input terminal.
58 to 63	S9 to S4	O	Segment signal output and key matrix signal output terminals. (A key matrix signal is output at only pins 62 and 63.)
64	VDD	–	Power supply terminal (+5 V).

- **Semiconductor Lead Layouts**

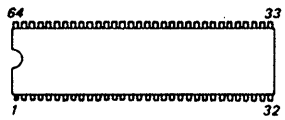
CX20018
LC9600R-183



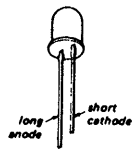
M5F7805
M5F78M05
NJM7812FA



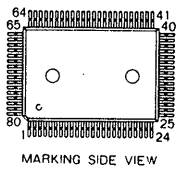
μPD75206CW-045



SEL2510C

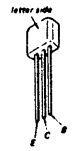


CXD1079Q



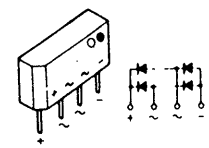
M54543L

2SA1175

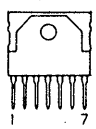


2SK246GR

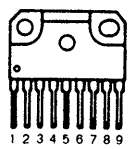
SIVB40



LA5666

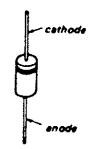


M5241L

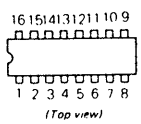


2SA1345
2SA1346
2SC634SP
2SC2724-C
2SC3399
2SC3400
2SC3402

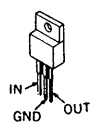
EQA02-25C
HZ3ALL
HZ6B2L
HZ9B2L
US1060M
10E2N



LA7220
M4053BP
PCM56P-S
TC4052BP

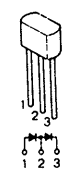


M5F7905
M5F79M05
NJM7912FA

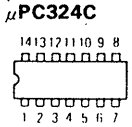


2SC1583

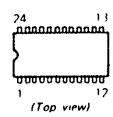
MC931



LC4066BH
LC4966
MC74HC74N
TC4011UBP
TC74HC08P
TC74HCU04P
μPC339C
μPC4084C
μPC4574C
μPC324C

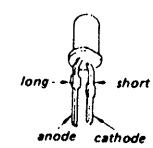


NE657N

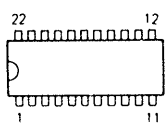


2SJ44

SEL2210S-C

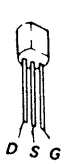


LC7535

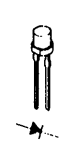


NJM4560D
TL082CP
LF412CN

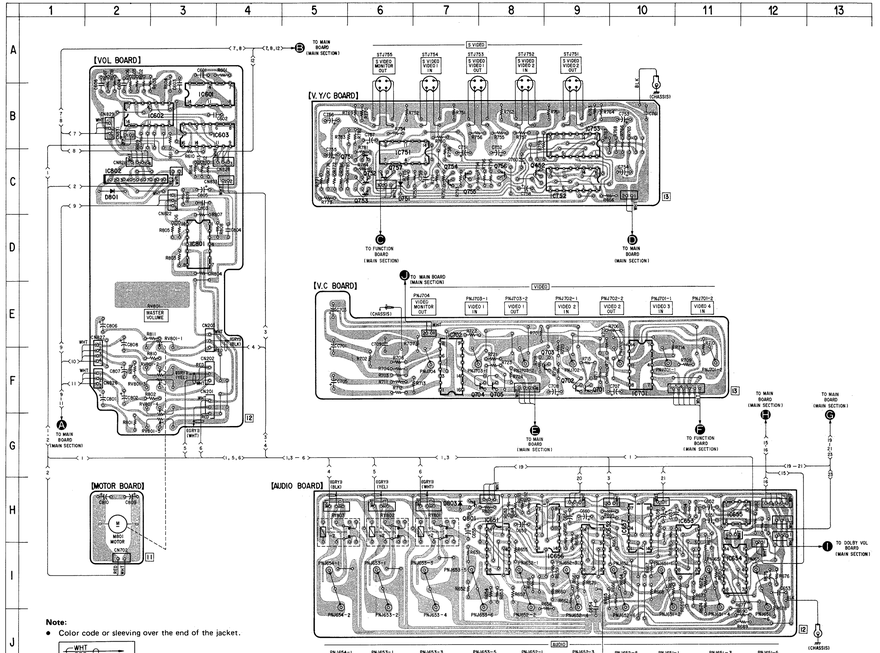
2SK152-2



SEL2413E



3-1. I/O SECTION PRINTED WIRING BOARDS AND SCHEMATIC DIAGRAM



Note:

- Color code or sleeving over the end of the jacket.

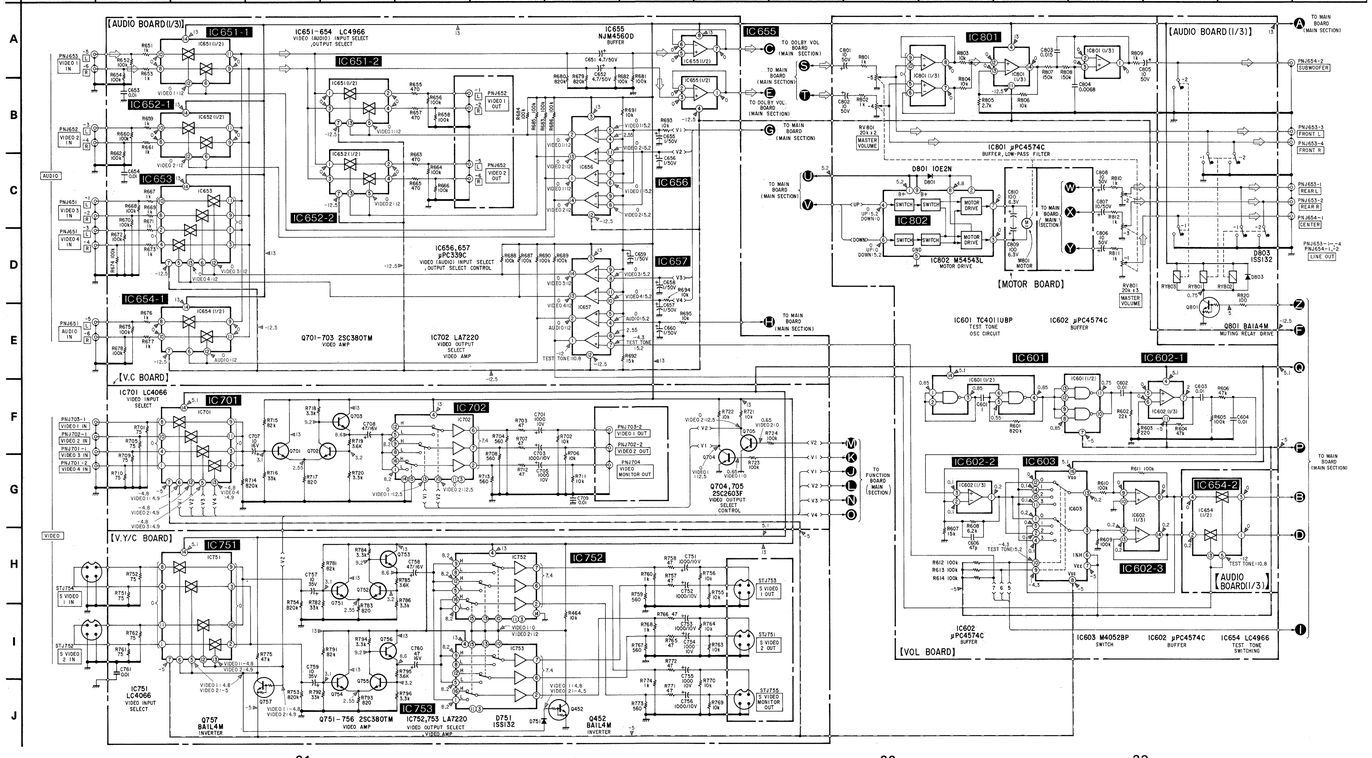
- ○—— : parts extracted from the component side.
- ▒▒▒ : Pattern on the side which is seen.

Note:

- All capacitors are in μF unless otherwise noted. pF : μμF
  50WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and ¼W or less unless otherwise specified.
- ▬▬ : B+ Line
- ▬▬ : B− Line
- Voltage and waveforms are dc with respect to ground under no-signal conditions.
- Voltages are taken with a VOM (50 kΩ/V).
  Voltage variations may be noted due to normal production tolerances.
- Signal path.
  ⇨ : VIDEO 1 AUDIO SIGNAL

● Semiconductor Location — I/O SECTION —

Ref. No.	Location	Ref. No.	Location
D751	C-6	Q452	C-8
D801	C-2	Q701	F-9
D803	H-7	Q702	F-9
		Q703	F-9
IC601	B-3	Q704	F-8
IC602	B-3	Q705	F-8
IC603	B-4	Q751	C-6
IC651	H-8	Q752	C-6
IC652	H-9	Q753	C-6
IC653	H-11	Q754	C-7
IC654	I-11	Q755	C-7
IC655	H-11	Q756	C-8
IC656	I-9	Q757	C-8
IC657	H-10	Q801	H-7
IC701	F-10		
IC702	E-7		
IC751	C-6		
IC752	C-9		
IC753	B-9		
IC801	D-3		
IC802	C-2		



3-2. MAIN SECTION PRINTED WIRING BOARDS

● See page 18 for Semiconductor Lead Layouts.

Note on Schematic Diagram:

- All capacitors are in μF unless otherwise noted. pF: μμF
  50WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and ¼W or less unless otherwise specified.
- : nonflammable resistor.
- : fusible resistor.
- : B+ Line
- : B– Line
- : adjustment for repair.
- Voltage and waveforms are dc with respect to ground under no-signal conditions.
- Voltages are taken with a VOM (50 kΩ/V).
  Voltage variations may be noted due to normal production tolerances.
- Waveforms are taken with a oscilloscope.
  Voltage variations may be noted due to normal production tolerances.
- Signal path.
  : VIDEO 1 AUDIO SIGNAL
- Switch

Ref. No.	Switch	Position
S901–903, S951–955, S971, 972	KEY MATRIX	
S981	SURROUND LEVEL +, –	OFF
S991	POWER	OFF

Note:
The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

Note:
Les composants identifiés par une marque ⚠ sont critiques pour la sécurité.
Ne les remplacer que par une pièce portant le numéro spécifié.

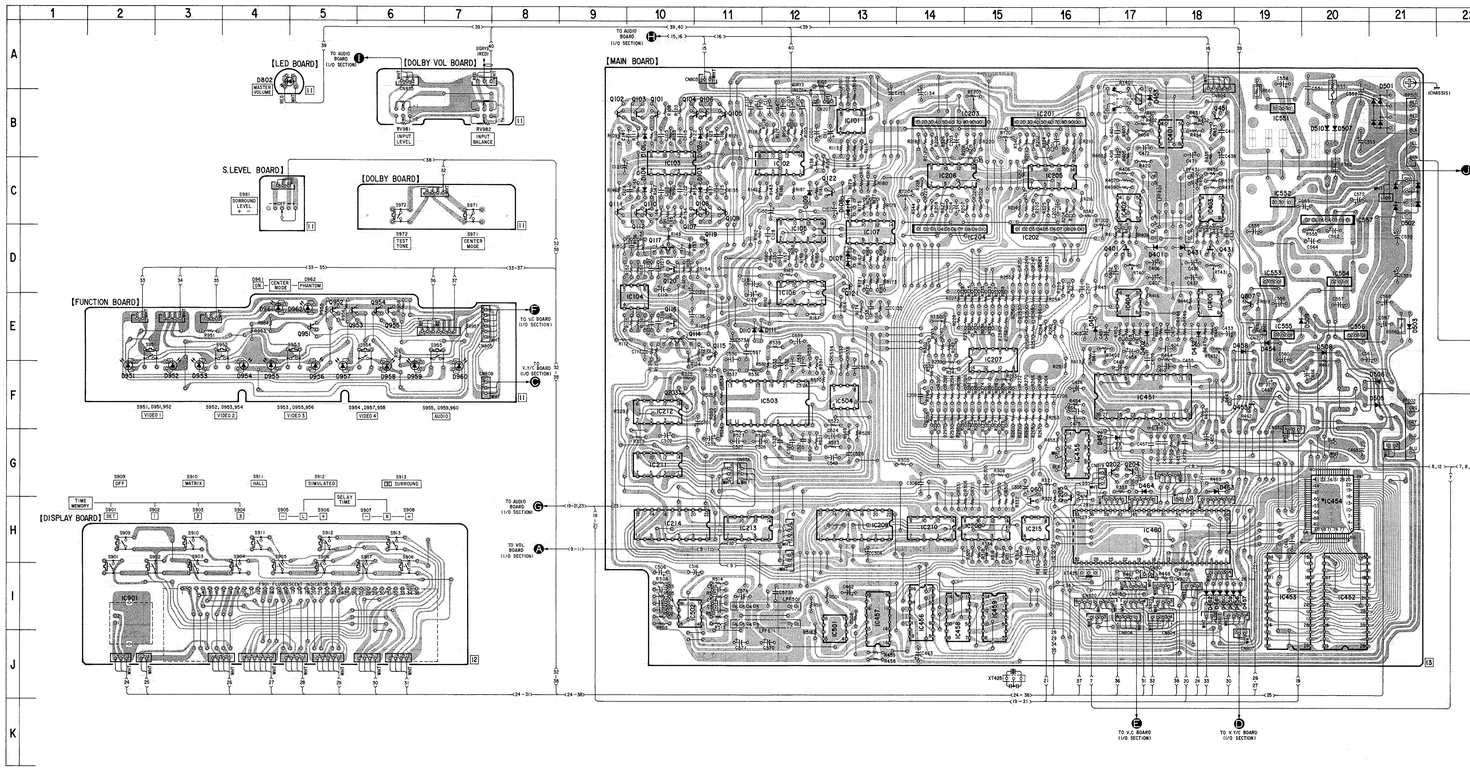
Note on Printed Wiring Boards:

- Color code or sleeving over the end of the jacket.

- o—— : parts extracted from the component side.
- ▒▒▒ : Pattern on the side which is seen.

● Semiconductor Location — MAIN SECTION —

Ref. No.	Location	Ref. No.	Location	Ref. No.	Location
D101	B-10	IC101	B-13	Q101	B-10
D102	B-11	IC102	C-12	Q102	B-9
D103	C-11	IC103	C-10	Q103	B-10
D104	C-10	IC104	E-10	Q104	B-10
D107	D-13	IC105	D-12	Q105	B-11
D108	C-13	IC106	D-12	Q106	B-11
D109	C-12	IC107	D-13	Q107	D-10
D110	E-11	IC201	B-16	Q108	C-11
D111	E-12	IC202	D-15	Q109	C-11
D401	D-17	IC203	B-15	Q110	C-10
D402	E-17	IC204	D-15	Q111	C-9
D431	D-18	IC205	C-16	Q112	D-10
D432	E-18	IC206	E-14	Q114	E-10
D451	E-16	IC207	E-15	Q115	E-11
D452	G-17	IC208	H-15	Q116	E-10
D453	B-17	IC209	H-13	Q117	D-10
D454	E-19	IC210	H-14	Q119	D-11
D456		IC211	G-10	Q120	D-10
D457	I-19	IC212	F-10	Q121	D-13
D458	I-19	IC213	H-11	Q122	C-12
D459	E-19	IC214	H-10	Q202	G-17
D460	I-18	IC215	H-16	Q203	F-10
D461	I-18	IC401	B-18	Q204	G-17
D462	I-18	IC402	C-17	Q205	G-16
D463	I-18	IC403	C-18	Q401	D-17
D464	G-18	IC404	E-17	Q431	D-18
D501	G-17	IC405	E-18	Q451	B-18
D502	A-21	IC451	F-17	Q453	F-19
D503	C-21	IC452	I-20	Q601	G-16
D505	E-21	IC453	I-19	Q807	E-19
D506	F-21	IC454	H-20	Q951	E-5
D507	F-21	IC455	G-16	Q952	E-5
D508	B-20	IC456	I-14	Q953	E-5
D509	E-20	IC457	I-13	Q954	E-6
D510	E-20	IC458	I-14	Q955	E-6
D802	B-20	IC459	I-15		
D951	A-4	IC460	H-17		
D952	F-2	IC501	I-13		
D953	F-3	IC502	I-10		
D954	F-3	IC503	F-12		
D955	F-4	IC504	F-13		
D956	F-4	IC551	B-19		
D957	F-5	IC552	C-19		
D958	F-5	IC553	D-19		
D959	F-6	IC554	D-20		
D960	F-6	IC555	E-19		
D961	F-7	IC556	E-20		
D962	E-4	IC557	C-20		
	E-5	IC901	I-2		



3-3. MAIN SECTION SCHEMATIC DIAGRAM

- See page 24 for notes.

[MAIN BOARD]
IC101 NJM4560D DIFFERENTIAL AMP
IC102 μPC4574C HIGH-PASS FILTER
IC103 μPC324C LOGIC
D101–104 1SS132
Q101–112 2SA1048 DC AMP
IC104 LF412CN AMP
IC107 μPC4084C LOGIC
IC201–204 M5241L VCA
IC205, 206 μPC4574C BUFFER
IC207 μPC4574C MATRIX
IC208 μPC4574C LINE AMP
Q601 2SK246GR CENTER CONTROL
IC209 LC7535 VOLUME
IC210 μPC4574C BUFFER
IC211 LC4966 BYPASS/SURROUND SWITCHING
IC212 LC4966 SURROUND SWITCHING
IC214 LC7535 VOLUME
IC213 μPC4574C BUFFER
IC503 NE657N DOLBY AMP
IC504 NJM4560D LINE AMP
IC215 NJM4560D LINE AMP
Q205 BN1L4M PHANTOM SWITCHING
Q202 BN1L4M SURROUND SWITCHING
Q204 BA1A4M Q203 BA1L4M SURROUND SWITCHING
D464 1SS132
Q121 BA1L4M IC106 LC4966 IC105 μPC339C DOUBLE TIME CONSTANT CIRCUIT
Q115, 119 2SC2785 DIFFERENTIAL AMP
Q114, 117 2SC1583-F DIFFERENTIAL AMP
Q116, 120 2SJ44 DIFFERENTIAL AMP
D107 MC931
D108 MC931
D110, 111 HZ3ALL
IC102 μPC4574C BUFFER
IC102 μPC4574C COMPARATOR
D109 1SS132
Q122 2SC2785 OVER DET SWITCH
D453 1SS132
Q451 BA1A4M RELAY DRIVE
RV981 10k x2 INPUT LEVEL
RV982 20k x2 INPUT BALANCE
[DOLBY VOL BOARD]
TO AUDIO BOARD (I/O SECTION)
IC401 NJM4560D LINE AMP
IC402, 403 NJM4560D BUFFER
IC402, 403 NJM4560D A/D AMP
Q401, 431 2SK152-2 SAMPLING SWITCH
IC404, 405 TL082CP A/D AMP
D402 1SS132
D432 1SS132
D401 HZ6B2L
D431 HZ6B2L
IC451 CX20018 A/D CONVERTER
D451 HZ6B2L
D452 1SS132
IC452, 453 LC9600R-183 STATIC RAM
IC455 MC74HCU04N SHAPER
IC454 CXD1079Q DIGITAL SIGNAL PROCESSOR
IC456 PCM56P D/A CONVERTER
IC458 MC74HC74N LATCH
IC459 MC74HC08N SWITCHING
IC457 μPD4053 SWITCHING
IC501 TL082CP BUFFER
IC502 NJM4560D LINE AMP
[DISPLAY BOARD(1/3)]
FL901 FLUORESCENT INDICATOR TUBE
OVER MEMORY OFF MATRIX INV. HALL kHz dB m sec SIMULATED INV.
[FUNCTION BOARD(1/3)]
[S.LEVEL BOARD]
[DOLBY BOARD]
D456, 457, D459–462 1SS132
IC901 BX1387 REMOTE CONTROL DET
D961, 962 SEL2210S-D
D951–958 SEL2210S-D
D959, 960 SEL2510C-D
Q951–955 BN1F4M FUNCTION SWITCH, LED DRIVE
IC460 μPD75206CW-066 SYSTEM CONTROL
XT452 4.19MHz
Q807 BA1F4M LED DRIVE
D802 SEL2213C
TO AUDIO BOARD (I/O SECTION)
TO V.C BOARD (I/O SECTION)
TO VOL BOARD (I/O SECTION)
IC553 M5F78M05, IC554 M5F79M05 REG
IC551 M5F7812, IC552 M5F7912, IC555 M5F7805, IC556 M5F7905 REG
D501, 502 S1VB10 RECT
D508 10E2N
D463 HZ9B2L
D454 1SS132
D509 10E2N
D503, 507, 510 10E2N
Q453 BA1A4M RESET SWITCH
D458 1SS132
T901 POWER TRANSFORMER
[AC SW BOARD]
[FILTER BOARD]
[LED BOARD]
IC557 LA5666 REG/RESET
D506 EQA01-25
D505 HZ6B2L
AC IN

SDP-777ES

SECTION 4
EXPLODED VIEWS

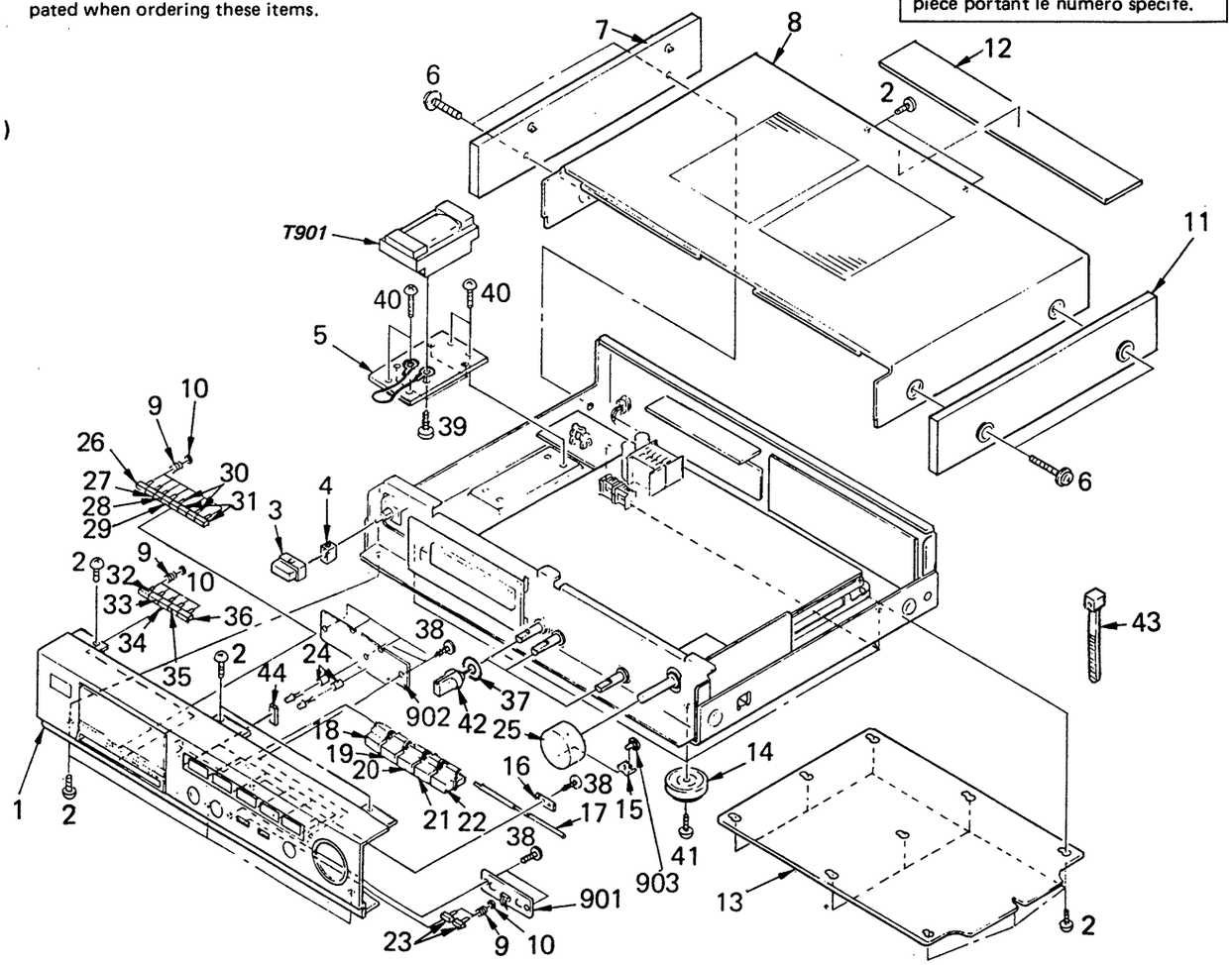
NOTE:

- The mechanical parts with no reference number in the exploded views are not supplied.
- The construction parts of an assembled part are indicated with a collation number in the remark column.
- Items marked "★" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- Due to standardization, parts with part number suffix -XX and -X may be different from the parts specified in the components used on the set.
- Color Indication of Appearance Parts
  Example:
  (RED) . . . KNOB, BALANCE (WHITE)
  ↑ Cabinet's Color ↑ Parts' Color

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

Les composants identifiés par une marque ⚠ sont critiques pour la sécurité.
Ne les remplacer que par une pièce portant le numéro spécifé.

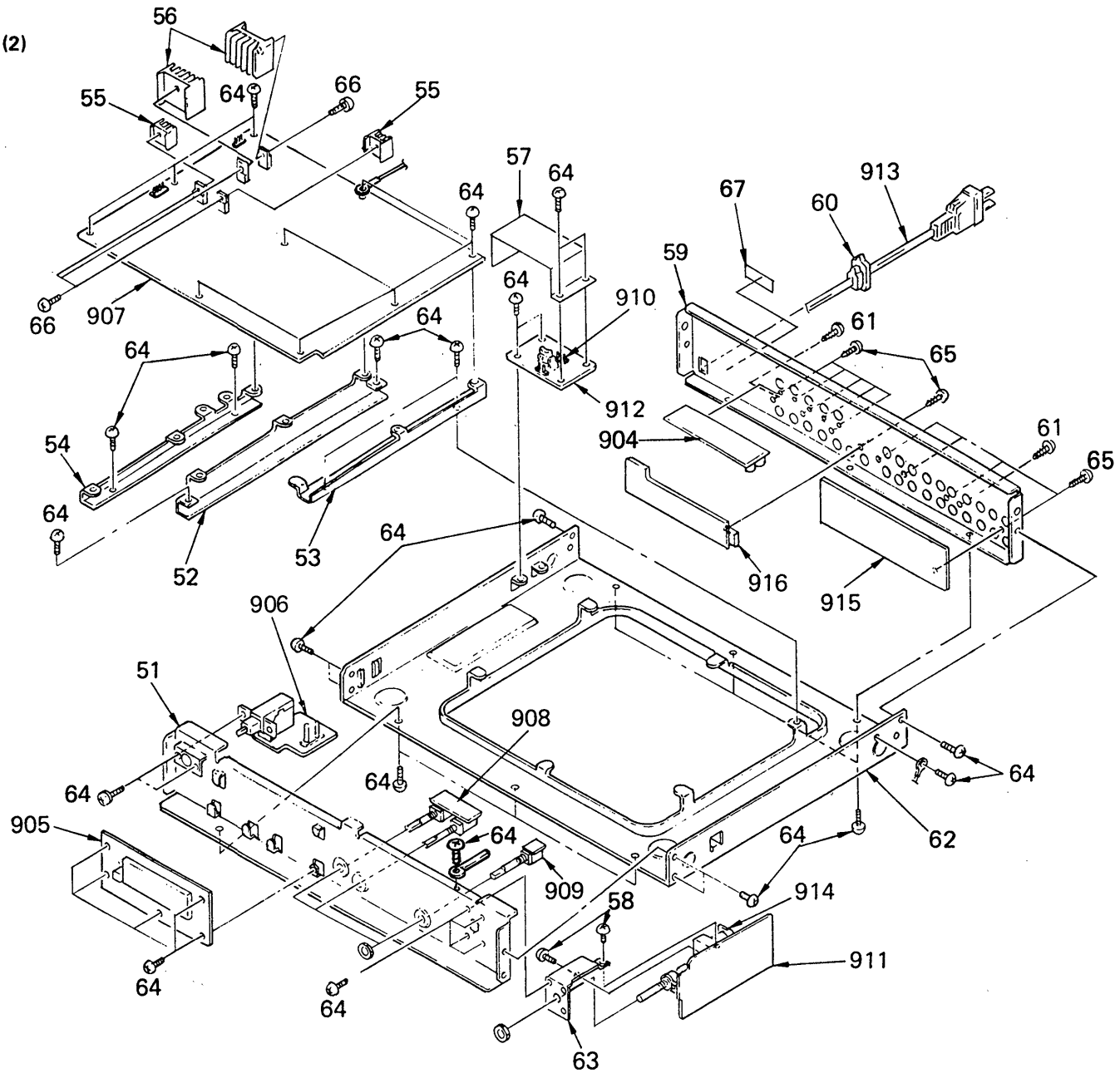
(1)



No.	Part No.	Description	Remarks
1	X-4915-430-1	PANEL ASSY, FRONT	
2	7-682-547-09	SCREW +BVTT 3X6 (S)	
3	4-908-046-01	KNOB, SQUARE	
4	*4-864-307-00	RING	
5	*4-908-063-01	BRACKET (C), TRANSFORMER	
6	4-885-979-11	SCREW (4X25)	
7	X-4886-014-1	PLATE (LEFT) ASSY, SIDE	
8	4-908-043-01	CASE	
9	4-915-427-01	SPRING, COMPRESSION	
10	4-862-338-00	RING, STOPPER	
11	X-4886-015-1	PLATE (RIGHT) ASSY, SIDE	
12	*4-908-074-01	SHEET, DAMPING	
13	*4-908-036-01	PLATE, BOTTOM	
14	X-4886-009-1	LEG ASSY	
15	*4-901-919-00	HOUSE, LED LAMP	
16	*4-923-107-01	RETAINER, SHAFT	
17	*4-923-113-01	SHAFT	
18	4-922-223-01	BUTTON (A), SQUARE	
19	4-922-223-11	BUTTON (A), SQUARE	
20	4-922-223-21	BUTTON (A), SQUARE	
21	4-923-112-01	BUTTON (VIDEO 4)	
22	4-923-112-11	BUTTON (AUDIO)	
23	4-908-027-01	BUTTON (C), SQUARE	
24	*4-911-676-01	SPACER, LED	

No.	Part No.	Description	Remarks
25	X-4915-421-1	KNOB ASSY	
26	4-923-108-01	BUTTON (SET)	
27	4-923-108-11	BUTTON (1)	
28	4-923-108-21	BUTTON (2)	
29	4-923-108-31	BUTTON (3)	
30	4-923-108-41	BUTTON (-)	
31	4-923-108-51	BUTTON (+)	
32	4-923-114-01	BUTTON (OFF)	
33	4-923-114-11	BUTTON (MATRIX)	
34	4-923-114-21	BUTTON (HALL)	
35	4-923-114-31	BUTTON (SIMULATED)	
36	4-923-114-41	BUTTON (SURROUND)	
37	3-533-938-00	CLOTH	
38	7-685-133-19	SCREW +BTP 2.6X6 TYPE2 N-S	
39	7-685-160-11	SCREW +P 4X10 TYPE2 NON-SLIT	
40	7-682-549-04	SCREW +BVTT 3X10 (S)	
41	7-685-883-09	SCREW +BVTT 4X12 (S)	
42	4-908-097-01	KNOB	
43	3-655-653-21	BAND (TIGHTEN), BINDING	
44	*4-923-127-01	CUSHION, BUTTON	
901	*1-624-658-11	PC BOARD, DOLBY	
902	*1-624-653-11	PC BOARD, FUNCTION	
903	*1-624-664-11	PC BOARD, LED	
T901	⚠1-449-339-11	TRANSFORMER, POWER (US,CND)	
T901	⚠1-449-338-11	TRANSFORMER, POWER (AEP)	

(2)



No.	Part No.	Description	Remarks
51	*4-923-120-01	CHASSIS, FRONT	
52	*4-923-117-01	BRACKET (A)	
53	*4-923-118-01	BRACKET (C)	
54	*4-923-116-01	BRACKET (B)	
55	*4-363-146-00	HEAT SINK, V.OUT	
56	*4-921-402-01	HEAT SINK	
57	*4-908-078-01	PLATE, PROTECTION	
58	7-621-773-86	SCREW +BVTT 2.6X4 (S)	
59	*4-924-031-01	PANEL, BACK	
60	*3-703-244-00	BUSHING (2104), CORD	
61	4-887-711-20	SCREW, TERMINAL, + BVTP CLAW	
62	*4-908-042-01	CHASSIS, MAIN	
63	*4-923-115-01	BRACKET (VOLUME)	
64	7-682-547-09	SCREW +BVTT 3X6 (S)	
65	7-685-646-79	SCREW +BVTP 3X8 TYPE2 N-S	

No.	Part No.	Description	Remarks
66	7-682-548-09	SCREW +B 3X8	
67	*4-924-041-01	LABEL, MODEL NUMBER (AEP)	
67	*4-924-041-11	LABEL, MODEL NUMBER (AEP)	
67	*4-923-195-01	LABEL, MODEL NUMBER (US,CND)	
904	*1-624-656-13	PC BOARD, V.Y/C	
905	*1-624-654-12	PC BOARD, DISPLAY	
906	*1-624-659-12	PC BOARD, AC SW	
907	*A-4410-793-A	MOUNTED PCB, MAIN	
908	*1-624-661-11	PC BOARD, DOLBY VOL	
909	*1-624-657-11	PC BOARD, S.LEVEL	
910	1-535-416-00	TERMINAL	
911	*1-624-704-12	PC BOARD, VOL	
912	*1-624-660-12	PC BOARD, FILTER	
913	⚠1-555-795-21	CORD, POWER (AEP)	
913	⚠1-557-577-11	CORD, POWER (US, CND)	
914	*1-624-662-11	PC BOARD, MOTOR	
915	*A-4333-085-A	MOUNTED PCB, AUDIO	
916	*1-624-663-13	PC BOARD, V.C	

Note:
The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.

Note:
Les composants identifiés par une marque ⚠ sont critiques pour la sécurité.
Ne les remplacer que par une pièce portant le numéro spécifié.

SECTION 5
ELECTRICAL PARTS LIST

NOTE:

- Due to standardization, replacements in the parts list may be different from the parts specified in the diagrams or the components used on the set.
- Items marked "★" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- If there are two or more same circuits in a set such as a stereophonic machine, only typical circuit parts may be indicated and capacitors and resistors in other same circuits may be omitted.

CAPACITORS:
MF: μF, PF: μμF.

RESISTORS
- All resistors are in ohms.
- F: nonflammable

COILS
- MMH: mH, UH: μH

SEMICONDUCTORS
In each case, U: μ, for example:
UA...: μA..., UPA...: μPA...,
UPC...: μPC, UPD...: μPD...

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

Les composants identifiés par une marque ⚠ sont critiques pour la sécurité.
Ne les remplacer que par une pièce portant le numéro spécifié.

Ref.No.	Part No.	Description
901	*1-624-658-11	PC BOARD, DOLBY
902	*1-624-653-11	PC BOARD, FUNCTION
903	*1-624-664-11	PC BOARD, LED
904	*1-624-656-13	PC BOARD, V.Y/C
905	*1-624-654-12	PC BOARD, DISPLAY
906	*1-624-659-12	PC BOARD, AC SW
907	*A-4410-793-A	MOUNTED PCB, MAIN
908	*1-624-661-11	PC BOARD, DOLBY VOL
909	*1-624-657-11	PC BOARD, S.LEVEL
910	1-535-416-00	TERMINAL
911	*1-624-704-12	PC BOARD, VOL
912	*1-624-660-12	PC BOARD, FILTER
913	⚠1-557-577-11	CORD, POWER
914	*1-624-662-11	PC BOARD, MOTOR
915	*A-4333-085-A	MOUNTED PCB, AUDIO
916	*1-624-663-13	PC BOARD, V.C
BP501	*1-535-118-00	TERMINAL 5P
BP502	*1-535-117-00	TERMINAL 4P
BP901	*1-535-139-00	BASE POST 19MM (10MM PITCH) 2P
BP902	*1-535-139-00	BASE POST 19MM (10MM PITCH) 2P

Ref.No.	Part No.	Description			
C101	1-123-369-00	ELECT	4.7MF	20%	50V
C102	1-136-165-00	FILM	0.1MF	5%	50V
C103	1-136-165-00	FILM	0.1MF	5%	50V
C104	1-130-469-00	MYLAR	680PF	5%	50V
C105	1-136-157-00	FILM	0.022MF	5%	50V
C111	1-123-369-00	ELECT	4.7MF	20%	50V
C112	1-136-165-00	FILM	0.1MF	5%	50V
C113	1-136-165-00	FILM	0.1MF	5%	50V
C114	1-130-469-00	MYLAR	680PF	5%	50V
C115	1-136-157-00	FILM	0.022MF	5%	50V
C116	1-136-171-00	FILM	0.33MF	5%	50V
C117	1-162-215-31	CERAMIC	47PF	5%	50V
C118	1-162-290-31	CERAMIC	470PF	10%	50V
C119	1-123-381-00	ELECT	2.2MF	20%	50V
C120	1-123-356-00	ELECT	10MF	20%	25V
C121	1-123-356-00	ELECT	10MF	20%	25V
C122	1-136-157-00	FILM	0.022MF	5%	50V
C123	1-136-157-00	FILM	0.022MF	5%	50V
C124	1-136-171-00	FILM	0.33MF	5%	50V
C125	1-136-171-00	FILM	0.33MF	5%	50V
C126	1-162-215-31	CERAMIC	47PF	5%	50V
C127	1-162-290-31	CERAMIC	470PF	10%	50V
C128	1-136-165-00	FILM	0.1MF	5%	50V
C129	1-124-257-00	ELECT	2.2MF	20%	50V
C130	1-136-165-00	FILM	0.1MF	5%	50V
C131	1-124-257-00	ELECT	2.2MF	20%	50V
C132	1-136-165-00	FILM	0.1MF	5%	50V
C133	1-136-165-00	FILM	0.1MF	5%	50V
C134	1-123-333-00	ELECT	100MF	20%	25V
C135	1-123-333-00	ELECT	100MF	20%	25V
C136	1-123-356-00	ELECT	10MF	20%	25V
C137	1-162-215-31	CERAMIC	47PF	5%	50V
C138	1-162-215-31	CERAMIC	47PF	5%	50V
C141	1-136-171-00	FILM	0.33MF	5%	50V
C150	1-123-380-00	ELECT	1MF	20%	50V
C151	1-123-380-00	ELECT	1MF	20%	50V
C201	1-123-330-00	ELECT	22MF	20%	25V
C202	1-123-330-00	ELECT	22MF	20%	25V
C203	1-123-330-00	ELECT	22MF	20%	25V
C204	1-123-330-00	ELECT	22MF	20%	25V
C205	1-136-167-00	FILM	0.15MF	5%	50V
C206	1-124-465-00	ELECT	0.47MF	20%	50V
C207	1-126-048-11	ELECT	10MF	20%	50V
C208	1-162-282-31	CERAMIC	100PF	10%	50V
C209	1-162-282-31	CERAMIC	100PF	10%	50V
C301	1-126-048-11	ELECT	10MF	20%	50V
C302	1-126-048-11	ELECT	10MF	20%	50V
C303	1-123-369-00	ELECT	4.7MF	20%	50V
C304	1-123-369-00	ELECT	4.7MF	20%	50V
C305	1-162-286-31	CERAMIC	220PF	10%	50V
C306	1-162-286-31	CERAMIC	220PF	10%	50V
C401	1-136-157-00	FILM	0.022MF	5%	50V
C402	1-104-308-11	POLYSTYRENE	0.0018MF	5%	50V
C403	1-123-356-00	ELECT	10MF	20%	25V
C404	1-162-282-31	CERAMIC	100PF	10%	50V
C405	1-162-282-31	CERAMIC	100PF	10%	50V
C406	1-123-330-00	ELECT	22MF	20%	25V
C407	1-123-330-00	ELECT	22MF	20%	25V
C408	1-123-369-00	ELECT	4.7MF	20%	50V
C410	1-162-282-31	CERAMIC	100PF	10%	50V
C411	1-136-157-00	FILM	0.022MF	5%	50V
C415	1-162-282-31	CERAMIC	100PF	10%	50V
C432	1-104-308-11	POLYSTYRENE	0.0018MF	5%	50V
C433	1-123-356-00	ELECT	10MF	20%	25V
C436	1-123-330-00	ELECT	22MF	20%	25V
C437	1-123-330-00	ELECT	22MF	20%	25V
C438	1-123-369-00	ELECT	4.7MF	20%	50V
C451	1-123-330-00	ELECT	22MF	20%	25V
C452	1-123-380-00	ELECT	1MF	20%	50V
C454	1-123-330-00	ELECT	22MF	20%	25V
C455	1-161-379-00	CERAMIC	0.01MF	30%	16V
C456	1-162-294-31	CERAMIC	0.001MF	10%	50V

Ref.No.	Part No.	Description			
C457	1-162-199-31	CERAMIC	10PF	5%	50V
C458	1-162-195-31	CERAMIC	4.7PF	10%	50V
C461	1-161-379-00	CERAMIC	0.01MF	30%	16V
C462	1-123-330-00	ELECT	22MF	20%	25V
C463	1-123-330-00	ELECT	22MF	20%	25V
C464	1-162-294-31	CERAMIC	0.001MF	10%	50V
C465	1-125-444-11	DOUBLE LAYERS	0.1F		5.5V
C466	1-131-381-00	TANTALUM	47MF	20%	10V
C467	1-124-247-00	ELECT	10MF	20%	35V
C468	1-123-356-00	ELECT	10MF	20%	25V
C471	1-123-330-00	ELECT	22MF	20%	25V
C472	1-123-330-00	ELECT	22MF	20%	25V
C474	1-161-379-00	CERAMIC	0.01MF	30%	16V
C475	1-161-379-00	CERAMIC	0.01MF	30%	16V
C476	1-123-356-00	ELECT	10MF	20%	25V
C477	1-161-379-00	CERAMIC	0.01MF	30%	16V
C502	1-130-471-00	MYLAR	0.001MF	5%	50V
C503	1-130-471-00	MYLAR	0.001MF	5%	50V
C504	1-130-478-00	MYLAR	0.0039MF	5%	50V
C506	1-126-048-11	ELECT	10MF	20%	50V
C512	1-130-471-00	MYLAR	0.001MF	5%	50V
C513	1-130-471-00	MYLAR	0.001MF	5%	50V
C514	1-130-478-00	MYLAR	0.0039MF	5%	50V
C516	1-126-048-11	ELECT	10MF	20%	50V
C521	1-136-165-00	FILM	0.1MF	5%	50V
C522	1-136-171-00	FILM	0.33MF	5%	50V
C523	1-136-161-00	FILM	0.047MF	5%	50V
C524	1-123-380-00	ELECT	1MF	20%	50V
C525	1-123-380-00	ELECT	1MF	20%	50V
C526	1-136-159-00	FILM	0.033MF	5%	50V
C527	1-130-479-00	MYLAR	0.0047MF	5%	50V
C528	1-162-282-31	CERAMIC	100PF	10%	50V
C531	1-136-165-00	FILM	0.1MF	5%	50V
C532	1-136-171-00	FILM	0.33MF	5%	50V
C533	1-136-161-00	FILM	0.047MF	5%	50V
C534	1-123-380-00	ELECT	1MF	20%	50V
C535	1-123-380-00	ELECT	1MF	20%	50V
C536	1-130-479-00	MYLAR	0.0047MF	5%	50V
C537	1-136-159-00	FILM	0.033MF	5%	50V
C538	1-162-282-31	CERAMIC	100PF	10%	50V
C539	1-123-380-00	ELECT	1MF	20%	50V
C549	1-123-380-00	ELECT	1MF	20%	50V
C551 ⚠	1-130-789-00	FILM	1MF	5%	100V
C552	1-124-636-00	ELECT	3300MF	20%	25V
C553	1-124-636-00	ELECT	3300MF	20%	25V
C554	1-123-333-00	ELECT	100MF	20%	16V
C555	1-123-333-00	ELECT	100MF	20%	16V
C556	1-123-333-00	ELECT	100MF	20%	16V
C557	1-123-333-00	ELECT	100MF	20%	16V
C558	1-124-556-11	ELECT	2200MF	20%	16V
C559	1-124-556-11	ELECT	2200MF	20%	16V
C560	1-123-333-00	ELECT	100MF	20%	16V
C561	1-123-333-00	ELECT	100MF	20%	16V
C562	1-123-611-00	ELECT	1MF	20%	50V
C563	1-123-611-00	ELECT	1MF	20%	50V
C564	1-123-611-00	ELECT	1MF	20%	50V
C566	1-124-122-61	ELECT	100MF	20%	50V

Ref.No.	Part No.	Description			
C567	1-123-356-00	ELECT	10MF	20%	35V
C570	1-123-330-00	ELECT	22MF	20%	25V
C571	1-123-330-00	ELECT	22MF	20%	25V
C572	1-124-247-00	ELECT	10MF	20%	35V
C573A	1-124-995-11	ELECT	220MF	20%	10V
C573B	1-161-379-00	CERAMIC	0.01MF	30%	16V
C574	1-161-379-00	CERAMIC	0.01MF	30%	16V
C601	1-124-499-11	ELECT	1MF	20%	50V
C602	1-136-153-00	FILM	0.01MF	5%	50V
C603	1-136-153-00	FILM	0.01MF	5%	50V
C604	1-136-153-00	FILM	0.01MF	5%	50V
C606	1-162-215-31	CERAMIC	47PF	5%	50V
C651	1-123-369-00	ELECT	4.7MF	20%	50V
C652	1-123-369-00	ELECT	4.7MF	20%	50V
C653	1-161-379-00	CERAMIC	0.01MF	30%	16V
C654	1-161-379-00	CERAMIC	0.01MF	30%	16V
C655	1-123-611-00	ELECT	1MF	20%	50V
C656	1-123-611-00	ELECT	1MF	20%	50V
C657	1-123-611-00	ELECT	1MF	20%	50V
C658	1-123-611-00	ELECT	1MF	20%	50V
C659	1-123-611-00	ELECT	1MF	20%	50V
C660	1-123-611-00	ELECT	1MF	20%	50V
C701	1-124-559-51	ELECT	1000MF	20%	10V
C703	1-124-559-51	ELECT	1000MF	20%	10V
C705	1-124-559-51	ELECT	1000MF	20%	10V
C707	1-123-356-00	ELECT	10MF	20%	16V
C708	1-123-332-00	ELECT	47MF	20%	16V
C709	1-161-379-00	CERAMIC	0.01MF	30%	16V
C751	1-124-559-51	ELECT	1000MF	20%	10V
C752	1-124-559-51	ELECT	1000MF	20%	10V
C753	1-124-559-51	ELECT	1000MF	20%	10V
C754	1-124-559-51	ELECT	1000MF	20%	10V
C755	1-124-559-51	ELECT	1000MF	20%	10V
C756	1-124-559-51	ELECT	1000MF	20%	10V
C757	1-124-247-00	ELECT	10MF	20%	35V
C758	1-124-477-11	ELECT	47MF	20%	16V
C759	1-124-247-00	ELECT	10MF	20%	35V
C760	1-124-477-11	ELECT	47MF	20%	16V
C761	1-161-379-00	CERAMIC	0.01MF	30%	16V
C801	1-126-048-11	ELECT	10MF	20%	50V
C802	1-126-048-11	ELECT	10MF	20%	50V
C803	1-136-155-00	FILM	0.015MF	5%	50V
C804	1-130-481-00	MYLAR	0.0068MF	5%	50V
C805	1-126-048-11	ELECT	10MF	20%	50V
C806	1-126-048-11	ELECT	10MF	20%	50V
C807	1-126-048-11	ELECT	10MF	20%	50V
C808	1-126-048-11	ELECT	10MF	20%	50V
C809	1-124-443-00	ELECT	100MF	20%	6.3V
C810	1-124-443-00	ELECT	100MF	20%	6.3V
C991 ⚠	1-161-744-00	CERAMIC	0.01MF		400V
C992	1-130-159-00	FILM	0.047MF	20%	250V
CNP201*	1-564-506-11	PLUG, CONNECTOR 3P			
CNP202*	1-564-506-11	PLUG, CONNECTOR 3P			
CNP203*	1-564-506-11	PLUG, CONNECTOR 3P			
CNP207*	1-564-506-11	PLUG, CONNECTOR 3P			
CNP701*	1-564-505-11	PLUG, CONNECTOR 2P			
CNP702*	1-564-505-11	PLUG, CONNECTOR 2P			

Note:
The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

Note:
Les composants identifiés par une marque ⚠ sont critiques pour la sécurité.
Ne les remplacer que par une pièce portant le numéro spécifié.

Ref.No.	Part No.	Description
CNP801*	1-564-336-51	PIN, CONNECTOR 2P
CNP802*	1-564-337-51	PIN, CONNECTOR 3P
CNP803*	1-564-336-71	PIN, CONNECTOR 2P
CNP804*	1-564-339-51	PIN, CONNECTOR 5P
CNP805*	1-564-499-11	PIN, CONNECTOR 6P
CNP806*	1-564-338-61	PIN, CONNECTOR 4P
CNP807*	1-564-336-61	PIN, CONNECTOR 2P
CNP808*	1-564-496-11	PIN, CONNECTOR 3P
CNP817*	1-564-336-81	PIN, CONNECTOR 2P
CNP818*	1-564-338-71	PIN, CONNECTOR 4P
CNP819*	1-564-337-81	PIN, CONNECTOR 3P
CNP820*	1-564-341-51	PIN, CONNECTOR 7P
CNP821*	1-564-338-51	PIN, CONNECTOR 4P
CNP822*	1-564-337-51	PIN, CONNECTOR 3P
CNP823*	1-564-337-71	PIN, CONNECTOR 3P
CNP824*	1-564-338-81	PIN, CONNECTOR 4P
CNP826*	1-564-337-71	PIN, CONNECTOR 3P
CNP827*	1-564-338-71	PIN, CONNECTOR 4P
CNP828*	1-564-337-81	PIN, CONNECTOR 3P
CNP829*	1-564-337-61	PIN, CONNECTOR 3P
CNP831*	1-564-336-61	PIN, CONNECTOR 2P
CNP832*	1-564-337-61	PIN, CONNECTOR 3P
CNP833*	1-564-336-51	PIN, CONNECTOR 2P
CNP834*	1-564-337-61	PIN, CONNECTOR 3P
CNP835*	1-564-337-61	PIN, CONNECTOR 3P
CNP836*	1-564-336-51	PIN, CONNECTOR 2P
D101	8-719-000-26	DIODE US1060M
D102	8-719-000-26	DIODE US1060M
D103	8-719-000-26	DIODE US1060M
D104	8-719-000-26	DIODE US1060M
D107	8-719-000-12	DIODE MC931
D108	8-719-000-12	DIODE MC931
D109	8-719-000-26	DIODE US1060M
D110	8-719-942-31	ZENER HZ3ALL
D111	8-719-942-31	ZENER HZ3ALL
D401	8-719-910-65	ZENER HZ6B2L
D402	8-719-000-26	DIODE US1060M
D431	8-719-910-65	ZENER HZ6B2L
D432	8-719-000-26	DIODE US1060M
D451	8-719-910-65	ZENER HZ6B2L
D452	8-719-000-26	DIODE US1060M
D453	8-719-000-26	DIODE US1060M
D454	8-719-000-26	DIODE US1060M
D456	8-719-000-26	DIODE US1060M
D457	8-719-000-26	DIODE US1060M
D458	8-719-000-26	DIODE US1060M
D459	8-719-000-26	DIODE US1060M
D460	8-719-000-26	DIODE US1060M
D461	8-719-000-26	DIODE US1060M
D462	8-719-000-26	DIODE US1060M
D463	8-719-910-95	ZENER HZ9B2L
D464	8-719-000-26	DIODE US1060M
D501 ⚠	8-719-511-40	DIODE S1VB40
D502 ⚠	8-719-511-40	DIODE S1VB40
D503	8-719-200-77	DIODE 10E2N
D505	8-719-910-65	ZENER HZ6B2L

Ref.No.	Part No.	Description
D506	8-719-904-86	DIODE EQA02-25C
D507	8-719-200-77	DIODE 10E2N
D508	8-719-200-77	DIODE 10E2N
D509	8-719-200-77	DIODE 10E2N
D510	8-719-200-77	DIODE 10E2N
D751	8-719-000-26	DIODE US1060M
D801	8-719-200-77	DIODE 10E2N
D802	8-719-301-46	LED SEL2413E
D803	8-719-000-26	DIODE US1060M
D951	8-719-301-38	LED SEL2210S-C
D952	8-719-301-38	LED SEL2210S-C
D953	8-719-301-38	LED SEL2210S-C
D954	8-719-301-38	LED SEL2210S-C
D955	8-719-301-38	LED SEL2210S-C
D956	8-719-301-38	LED SEL2210S-C
D957	8-719-301-38	LED SEL2210S-C
D958	8-719-301-38	LED SEL2210S-C
D959	8-719-303-00	LED SEL2510C
D960	8-719-303-00	LED SEL2510C
D961	8-719-301-38	LED SEL2210S-C
D962	8-719-301-38	LED SEL2210S-C
FL901	1-519-449-11	INDICATOR TUBE, FLUORESCENT
IC101	8-759-745-60	IC NJM4560D
IC102	8-759-113-18	IC UPC4574C
IC103	8-759-132-40	IC UPC324C
IC104	8-759-972-47	IC LF412CN
IC105	8-759-133-90	IC UPC339C
IC106	8-759-801-01	IC LC4966
IC107	8-759-113-12	IC UPC4084C
IC201	8-759-603-82	IC M5241L
IC202	8-759-603-82	IC M5241L
IC203	8-759-603-82	IC M5241L
IC204	8-759-603-82	IC M5241L
IC205	8-759-113-18	IC UPC4574C
IC206	8-759-113-18	IC UPC4574C
IC207	8-759-113-18	IC UPC4574C
IC208	8-759-113-18	IC UPC4574C
IC209	8-759-820-11	IC LC7535
IC210	8-759-113-18	IC UPC4574C
IC211	8-759-801-01	IC LC4966
IC212	8-759-801-01	IC LC4966
IC213	8-759-113-18	IC UPC4574C
IC214	8-759-820-11	IC LC7535
IC215	8-759-745-60	IC NJM4560D
IC401	8-759-745-60	IC NJM4560D
IC402	8-759-745-60	IC NJM4560D
IC403	8-759-745-60	IC NJM4560D
IC404	8-759-990-82	IC TL082CP
IC405	8-759-990-82	IC TL082CP
IC451	8-752-001-80	IC CX20018
IC452	8-759-820-64	IC LC9600R-183
IC453	8-759-820-64	IC LC9600R-183
IC454	8-759-927-77	IC CXD1079Q
IC455	8-759-202-13	IC TC74HCU04P
IC456	8-759-937-95	IC PCM56P-S

Note:
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Note:
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Ref.No.	Part No.	Description
IC457	8-759-601-41	IC M4053BP
IC458	8-759-000-99	IC MC74HC74N
IC459	8-759-202-14	IC TC74HC08P
IC460	8-759-140-38	IC UPD75206CW-045
IC501	8-759-990-82	IC TL082CP
IC502	8-759-745-60	IC NJM4560D
IC503	8-759-927-57	IC NE657N
IC504	8-759-745-60	IC NJM4560D
IC551	8-759-701-79	IC NJM7812FA
IC552	8-759-701-88	IC NJM7912FA
IC553	8-759-604-35	IC M5F78M05
IC554	8-759-604-41	IC M5F79M05
IC555	8-759-604-29	IC M5F7805
IC556	8-759-604-47	IC M5F7905
IC557	8-759-802-61	IC LA5666
IC601	8-759-200-11	IC TC4011UBP
IC602	8-759-113-18	IC UPC4574C
IC603	8-759-240-52	IC TC4052BP
IC651	8-759-801-01	IC LC4966
IC652	8-759-801-01	IC LC4966
IC653	8-759-801-01	IC LC4966
IC654	8-759-801-01	IC LC4966
IC655	8-759-745-60	IC NJM4560D
IC656	8-759-133-90	IC UPC339C
IC657	8-759-133-90	IC UPC339C
IC701	8-759-800-37	IC LC4066BH
IC702	8-759-801-61	IC LA7220
IC751	8-759-800-37	IC LC4066BH
IC752	8-759-801-61	IC LA7220
IC753	8-759-801-61	IC LA7220
IC801	8-759-113-18	IC UPC4574C
IC802	8-759-600-24	IC M54543L
IC901	8-749-920-03	IC GP1U52
L401	1-408-902-21	INDUCTOR 0.47UH
L901 ⚠	1-421-960-11	TRANSFORMER, LINE FILTER
LPF401	1-464-869-11	FILTER UNIT, LOW PASS
LPF431	1-464-869-11	FILTER UNIT, LOW PASS
LPF501	1-464-870-11	FILTER UNIT, LOW PASS(NINTHLY)
LPF511	1-464-870-11	FILTER UNIT, LOW PASS(NINTHLY)
PNJ651	1-563-022-21	JACK, PIN 6P (AUDIO IN,VIDEO 3/4 IN)
PNJ652	1-563-022-21	JACK, PIN 6P(VIDEO 1 OUT,VIDEO 2 IN/OUT)
PNJ653	1-563-022-21	JACK, PIN 6P (VIDEO 1 IN,FRONT,REAR)
PNJ654	1-507-912-51	JACK, PIN 2P (CENTER,SUBWOOFER)
PNJ701	1-507-888-41	JACK, PIN 2P (VIDEO 3/4 IN)
PNJ702	1-507-888-41	JACK, PIN 2P (VIDEO 2 IN/OUT)
PNJ703	1-507-888-41	JACK, PIN 2P (VIDEO 1 IN/OUT)
PNJ704	1-563-202-41	JACK, PIN 1P (VIDEO MONITOR OUT)
Q101	8-729-117-54	TRANSISTOR 2SA1175
Q102	8-729-117-54	TRANSISTOR 2SA1175
Q103	8-729-117-54	TRANSISTOR 2SA1175
Q104	8-729-117-54	TRANSISTOR 2SA1175
Q105	8-729-117-54	TRANSISTOR 2SA1175
Q106	8-729-117-54	TRANSISTOR 2SA1175
Q107	8-729-117-54	TRANSISTOR 2SA1175
Q108	8-729-117-54	TRANSISTOR 2SA1175
Q109	8-729-117-54	TRANSISTOR 2SA1175

Ref.No.	Part No.	Description
Q110	8-729-117-54	TRANSISTOR 2SA1175
Q111	8-729-117-54	TRANSISTOR 2SA1175
Q112	8-729-117-54	TRANSISTOR 2SA1175
Q114	8-729-658-32	TRANSISTOR 2SC1583
Q115	8-729-600-27	TRANSISTOR 2SC634SP
Q116	8-729-104-45	TRANSISTOR 2SJ44
Q117	8-729-658-32	TRANSISTOR 2SC1583
Q119	8-729-600-27	TRANSISTOR 2SC634SP
Q120	8-729-104-45	TRANSISTOR 2SJ44
Q121	8-729-806-38	TRANSISTOR 2SC3399
Q122	8-729-600-27	TRANSISTOR 2SC634SP
Q202	8-729-806-20	TRANSISTOR 2SA1345
Q203	8-729-806-38	TRANSISTOR 2SC3399
Q204	8-729-806-28	TRANSISTOR 2SC3402
Q205	8-729-805-20	TRANSISTOR 2SA1345
Q401	8-769-162-00	TRANSISTOR 2SK152-2
Q431	8-769-162-00	TRANSISTOR 2SK152-2
Q451	8-729-806-28	TRANSISTOR 2SC3402
Q452	8-729-806-38	TRANSISTOR 2SC3399
Q453	8-729-806-28	TRANSISTOR 2SC3402
Q601	8-729-224-62	TRANSISTOR 2SK246GR
Q701	8-729-672-42	TRANSISTOR 2SC2724-C
Q702	8-729-672-42	TRANSISTOR 2SC2724-C
Q703	8-729-672-42	TRANSISTOR 2SC2724-C
Q704	8-729-600-27	TRANSISTOR 2SC634SP
Q705	8-729-600-27	TRANSISTOR 2SC634SP
Q751	8-729-672-42	TRANSISTOR 2SC2724-C
Q752	8-729-672-42	TRANSISTOR 2SC2724-C
Q753	8-729-672-42	TRANSISTOR 2SC2724-C
Q754	8-729-672-42	TRANSISTOR 2SC2724-C
Q755	8-729-672-42	TRANSISTOR 2SC2724-C
Q756	8-729-672-42	TRANSISTOR 2SC2724-C
Q757	8-729-806-38	TRANSISTOR 2SC3399
Q801	8-729-806-28	TRANSISTOR 2SC3402
Q807	8-729-806-34	TRANSISTOR 2SC3400
Q951	8-729-806-16	TRANSISTOR 2SA1346
Q952	8-729-806-16	TRANSISTOR 2SA1346
Q953	8-729-806-16	TRANSISTOR 2SA1346
Q954	8-729-806-16	TRANSISTOR 2SA1346
Q955	8-729-806-16	TRANSISTOR 2SA1346
R101	1-259-476-11	CARBON 100K 5% 1/6W
R102	1-259-444-11	CARBON 4.7K 5% 1/6W
R103	1-259-472-11	CARBON 68K 5% 1/6W
R104	1-259-468-11	CARBON 47K 5% 1/6W
R105	1-259-449-11	CARBON 7.5K 5% 1/6W
R106	1-259-456-11	CARBON 15K 5% 1/6W
R107	1-259-468-11	CARBON 47K 5% 1/6W
R108	1-259-464-11	CARBON 33K 5% 1/6W
R109	1-259-464-11	CARBON 33K 5% 1/6W
R110	1-259-428-11	CARBON 1K 5% 1/6W
R111	1-259-428-11	CARBON 1K 5% 1/6W
R112	1-259-452-11	CARBON 10K 5% 1/6W
R113	1-259-476-11	CARBON 100K 5% 1/6W
R114	1-259-444-11	CARBON 4.7K 5% 1/6W
R115	1-259-472-11	CARBON 68K 5% 1/6W
R116	1-259-468-11	CARBON 47K 5% 1/6W
R117	1-259-456-11	CARBON 15K 5% 1/6W
R118	1-259-449-11	CARBON 7.5K 5% 1/6W

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Replace only with part number specified.

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Ref.No.	Part No.	Description			
R119	1-259-468-11	CARBON	47K	5%	1/6W
R120	1-259-464-11	CARBON	33K	5%	1/6W
R121	1-259-464-11	CARBON	33K	5%	1/6W
R122	1-259-428-11	CARBON	1K	5%	1/6W
R123	1-259-428-11	CARBON	1K	5%	1/6W
R124	1-259-452-11	CARBON	10K	5%	1/6W
R125	1-259-476-11	CARBON	100K	5%	1/6W
R126	1-259-476-11	CARBON	100K	5%	1/6W
R127	1-259-428-11	CARBON	1K	5%	1/6W
R128	1-259-444-11	CARBON	4.7K	5%	1/6W
R129	1-259-461-11	CARBON	24K	5%	1/6W
R130	1-259-428-11	CARBON	1K	5%	1/6W
R131	1-259-452-11	CARBON	10K	5%	1/6W
R132	1-259-464-11	CARBON	33K	5%	1/6W
R133	1-259-460-11	CARBON	22K	5%	1/6W
R134	1-259-464-11	CARBON	33K	5%	1/6W
R135	1-259-464-11	CARBON	33K	5%	1/6W
R136	1-259-428-11	CARBON	1K	5%	1/6W
R137	1-259-428-11	CARBON	1K	5%	1/6W
R138	1-259-452-11	CARBON	10K	5%	1/6W
R139	1-259-452-11	CARBON	10K	5%	1/6W
R141	1-259-452-11	CARBON	10K	5%	1/6W
R142	1-259-464-11	CARBON	33K	5%	1/6W
R143	1-259-464-11	CARBON	33K	5%	1/6W
R144	1-259-464-11	CARBON	33K	5%	1/6W
R145	1-259-464-11	CARBON	33K	5%	1/6W
R146	1-259-464-11	CARBON	33K	5%	1/6W
R147	1-259-428-11	CARBON	1K	5%	1/6W
R148	1-259-428-11	CARBON	1K	5%	1/6W
R149	1-259-452-11	CARBON	10K	5%	1/6W
R150	1-259-452-11	CARBON	10K	5%	1/6W
R151	1-259-476-11	CARBON	100K	5%	1/6W
R152	1-259-476-11	CARBON	100K	5%	1/6W
R153	1-259-428-11	CARBON	1K	5%	1/6W
R154	1-259-444-11	CARBON	4.7K	5%	1/6W
R155	1-259-461-11	CARBON	24K	5%	1/6W
R156	1-259-428-11	CARBON	1K	5%	1/6W
R157	1-259-464-11	CARBON	33K	5%	1/6W
R158	1-259-436-11	CARBON	2.2K	5%	1/6W
R159	1-259-464-11	CARBON	33K	5%	1/6W
R160	1-259-484-11	CARBON	220K	5%	1/6W
R161	1-259-484-11	CARBON	220K	5%	1/6W
R162	1-259-484-11	CARBON	220K	5%	1/6W
R163	1-259-484-11	CARBON	220K	5%	1/6W
R164	1-259-476-11	CARBON	100K	5%	1/6W
R165	1-259-444-11	CARBON	4.7K	5%	1/6W
R166	1-259-484-11	CARBON	220K	5%	1/6W
R167	1-259-498-91	CARBON	820K	5%	1/6W
R168	1-259-498-91	CARBON	820K	5%	1/6W
R169	1-259-452-11	CARBON	10K	5%	1/6W
R170	1-259-452-11	CARBON	10K	5%	1/6W
R171	1-259-442-11	CARBON	3.9K	5%	1/6W
R172	1-259-404-11	CARBON	100	5%	1/6W
R173	1-259-442-11	CARBON	3.9K	5%	1/6W
R174	1-259-484-11	CARBON	220K	5%	1/6W
R175	1-259-498-91	CARBON	820K	5%	1/6W
R176	1-259-498-91	CARBON	820K	5%	1/6W

Ref.No.	Part No.	Description			
R177	1-259-452-11	CARBON	10K	5%	1/6W
R178	1-259-452-11	CARBON	10K	5%	1/6W
R179	1-259-442-11	CARBON	3.9K	5%	1/6W
R180	1-259-442-11	CARBON	3.9K	5%	1/6W
R181	1-259-404-11	CARBON	100	5%	1/6W
R182	1-259-404-11	CARBON	100	5%	1/6W
R183	1-259-404-11	CARBON	100	5%	1/6W
R184	1-259-476-11	CARBON	100K	5%	1/6W
R186	1-259-476-11	CARBON	100K	5%	1/6W
R187	1-259-458-11	CARBON	18K	5%	1/6W
R190	1-259-452-11	CARBON	10K	5%	1/6W
R191	1-259-464-11	CARBON	33K	5%	1/6W
R192	1-259-428-11	CARBON	1K	5%	1/6W
R201	1-259-453-11	CARBON	11K	5%	1/6W
R202	1-259-453-11	CARBON	11K	5%	1/6W
R203	1-259-453-11	CARBON	11K	5%	1/6W
R204	1-259-453-11	CARBON	11K	5%	1/6W
R205	1-259-453-11	CARBON	11K	5%	1/6W
R206	1-259-453-11	CARBON	11K	5%	1/6W
R207	1-259-453-11	CARBON	11K	5%	1/6W
R208	1-259-453-11	CARBON	11K	5%	1/6W
R209	1-259-460-11	CARBON	22K	5%	1/6W
R210	1-259-460-11	CARBON	22K	5%	1/6W
R211	1-259-460-11	CARBON	22K	5%	1/6W
R212	1-259-460-11	CARBON	22K	5%	1/6W
R213	1-259-460-11	CARBON	22K	5%	1/6W
R214	1-259-460-11	CARBON	22K	5%	1/6W
R215	1-259-460-11	CARBON	22K	5%	1/6W
R216	1-259-460-11	CARBON	22K	5%	1/6W
R217	1-259-460-11	CARBON	22K	5%	1/6W
R218	1-259-460-11	CARBON	22K	5%	1/6W
R219	1-259-460-11	CARBON	22K	5%	1/6W
R220	1-259-460-11	CARBON	22K	5%	1/6W
R221	1-259-460-11	CARBON	22K	5%	1/6W
R222	1-259-460-11	CARBON	22K	5%	1/6W
R223	1-259-460-11	CARBON	22K	5%	1/6W
R224	1-259-460-11	CARBON	22K	5%	1/6W
R225	1-259-475-11	CARBON	91K	5%	1/6W
R226	1-259-448-11	CARBON	6.8K	5%	1/6W
R227	1-259-476-11	CARBON	100K	5%	1/6W
R228	1-259-445-11	CARBON	5.1K	5%	1/6W
R229	1-259-472-11	CARBON	68K	5%	1/6W
R230	1-259-434-11	CARBON	1.8K	5%	1/6W
R231	1-259-484-11	CARBON	220K	5%	1/6W
R232	1-259-428-11	CARBON	1K	5%	1/6W
R233	1-259-475-11	CARBON	91K	5%	1/6W
R234	1-259-443-11	CARBON	4.3K	5%	1/6W
R235	1-259-475-11	CARBON	91K	5%	1/6W
R236	1-259-443-11	CARBON	4.3K	5%	1/6W
R237	1-259-472-11	CARBON	68K	5%	1/6W
R238	1-259-434-11	CARBON	1.8K	5%	1/6W
R239	1-259-461-11	CARBON	24K	5%	1/6W
R240	1-259-444-11	CARBON	4.7K	5%	1/6W
R241	1-259-464-11	CARBON	33K	5%	1/6W
R242	1-259-428-11	CARBON	1K	5%	1/6W
R243	1-259-475-11	CARBON	91K	5%	1/6W
R244	1-259-448-11	CARBON	6.8K	5%	1/6W

Ref.No.	Part No.	Description			
R245	1-259-476-11	CARBON	100K	5%	1/6W
R246	1-259-445-11	CARBON	5.1K	5%	1/6W
R247	1-259-472-11	CARBON	68K	5%	1/6W
R248	1-259-434-11	CARBON	1.8K	5%	1/6W
R249	1-259-484-11	CARBON	220K	5%	1/6W
R250	1-259-428-11	CARBON	1K	5%	1/6W
R251	1-259-472-11	CARBON	68K	5%	1/6W
R252	1-259-434-11	CARBON	1.8K	5%	1/6W
R253	1-259-475-11	CARBON	91K	5%	1/6W
R254	1-259-443-11	CARBON	4.3K	5%	1/6W
R255	1-259-475-11	CARBON	91K	5%	1/6W
R256	1-259-443-11	CARBON	4.3K	5%	1/6W
R257	1-259-461-11	CARBON	24K	5%	1/6W
R258	1-259-444-11	CARBON	4.7K	5%	1/6W
R259	1-259-464-11	CARBON	33K	5%	1/6W
R260	1-259-428-11	CARBON	1K	5%	1/6W
R261	1-259-488-11	CARBON	330K	5%	1/6W
R262	1-259-467-11	CARBON	43K	5%	1/6W
R263	1-259-488-11	CARBON	330K	5%	1/6W
R264	1-259-467-11	CARBON	43K	5%	1/6W
R265	1-259-478-11	CARBON	120K	5%	1/6W
R266	1-259-462-11	CARBON	27K	5%	1/6W
R267	1-259-478-11	CARBON	120K	5%	1/6W
R268	1-259-462-11	CARBON	27K	5%	1/6W
R269	1-259-477-11	CARBON	110K	5%	1/6W
R270	1-259-462-11	CARBON	27K	5%	1/6W
R271	1-259-477-11	CARBON	110K	5%	1/6W
R272	1-259-462-11	CARBON	27K	5%	1/6W
R273	1-259-470-11	CARBON	56K	5%	1/6W
R274	1-259-433-11	CARBON	1.6K	5%	1/6W
R275	1-259-470-11	CARBON	56K	5%	1/6W
R276	1-259-433-11	CARBON	1.6K	5%	1/6W
R277	1-259-486-11	CARBON	270K	5%	1/6W
R278	1-259-466-11	CARBON	39K	5%	1/6W
R279	1-259-486-11	CARBON	270K	5%	1/6W
R280	1-259-466-11	CARBON	39K	5%	1/6W
R281	1-259-461-11	CARBON	24K	5%	1/6W
R282	1-259-444-11	CARBON	4.7K	5%	1/6W
R283	1-259-464-11	CARBON	33K	5%	1/6W
R284	1-259-444-11	CARBON	4.7K	5%	1/6W
R285	1-259-484-11	CARBON	220K	5%	1/6W
R286	1-259-428-11	CARBON	1K	5%	1/6W
R287	1-259-471-11	CARBON	62K	5%	1/6W
R288	1-259-443-11	CARBON	4.3K	5%	1/6W
R289	1-259-466-11	CARBON	39K	5%	1/6W
R290	1-259-430-11	CARBON	1.2K	5%	1/6W
R291	1-259-475-11	CARBON	91K	5%	1/6W
R292	1-259-443-11	CARBON	4.3K	5%	1/6W
R293	1-259-466-11	CARBON	39K	5%	1/6W
R294	1-259-430-11	CARBON	1.2K	5%	1/6W
R295	1-259-475-11	CARBON	91K	5%	1/6W
R296	1-259-443-11	CARBON	4.3K	5%	1/6W
R297	1-259-484-11	CARBON	220K	5%	1/6W
R298	1-259-428-11	CARBON	1K	5%	1/6W
R299	1-259-471-11	CARBON	62K	5%	1/6W
R300	1-259-443-11	CARBON	4.3K	5%	1/6W
R301	1-259-461-11	CARBON	24K	5%	1/6W

Ref.No.	Part No.	Description			
R302	1-259-444-11	CARBON	4.7K	5%	1/6W
R303	1-259-461-11	CARBON	24K	5%	1/6W
R305	1-259-452-11	CARBON	10K	5%	1/6W
R306	1-259-455-11	CARBON	13K	5%	1/6W
R307	1-259-455-11	CARBON	13K	5%	1/6W
R308	1-259-452-11	CARBON	10K	5%	1/6W
R310	1-259-455-11	CARBON	13K	5%	1/6W
R311	1-259-455-11	CARBON	13K	5%	1/6W
R313	1-259-452-11	CARBON	10K	5%	1/6W
R314	1-259-452-11	CARBON	10K	5%	1/6W
R315	1-259-452-11	CARBON	10K	5%	1/6W
R316	1-259-452-11	CARBON	10K	5%	1/6W
R317	1-259-452-11	CARBON	10K	5%	1/6W
R318	1-259-452-11	CARBON	10K	5%	1/6W
R320	1-259-464-11	CARBON	33K	5%	1/6W
R321	1-259-498-91	CARBON	820K	5%	1/6W
R322	1-259-468-11	CARBON	47K	5%	1/6W
R323	1-259-476-11	CARBON	100K	5%	1/6W
R324	1-259-430-11	CARBON	1.2K	5%	1/6W
R325	1-259-430-11	CARBON	1.2K	5%	1/6W
R326	1-259-430-11	CARBON	1.2K	5%	1/6W
R327	1-259-430-11	CARBON	1.2K	5%	1/6W
R328	1-259-460-11	CARBON	22K	5%	1/6W
R329	1-259-460-11	CARBON	22K	5%	1/6W
R331	1-259-452-11	CARBON	10K	5%	1/6W
R332	1-259-452-11	CARBON	10K	5%	1/6W
R333	1-259-404-11	CARBON	100	5%	1/6W
R334	1-259-447-11	CARBON	6.2K	5%	1/6W
R341	1-259-476-11	CARBON	100K	5%	1/6W
R342	1-259-476-11	CARBON	100K	5%	1/6W
R343	1-259-476-11	CARBON	100K	5%	1/6W
R344	1-259-476-11	CARBON	100K	5%	1/6W
R401	1-259-452-11	CARBON	10K	5%	1/6W
R402	1-259-431-11	CARBON	1.3K	5%	1/6W
R403	1-259-426-11	CARBON	820	5%	1/6W
R404	1-259-431-11	CARBON	1.3K	5%	1/6W
R405	1-259-440-11	CARBON	3.3K	5%	1/6W
R406	1-259-450-11	CARBON	8.2K	5%	1/6W
R407	1-259-452-11	CARBON	10K	5%	1/6W
R408	1-259-452-11	CARBON	10K	5%	1/6W
R409	1-259-452-11	CARBON	10K	5%	1/6W
R410	1-259-460-11	CARBON	22K	5%	1/6W
R411	1-259-452-11	CARBON	10K	5%	1/6W
R412	1-259-424-11	CARBON	680	5%	1/6W
R413	1-259-450-11	CARBON	8.2K	5%	1/6W
R414	1-259-440-11	CARBON	3.3K	5%	1/6W
R415	1-259-460-11	CARBON	22K	5%	1/6W
R416	1-259-432-11	CARBON	1.5K	5%	1/6W
R417	1-259-460-11	CARBON	22K	5%	1/6W
R418	1-259-420-11	CARBON	470	5%	1/6W
R419	1-259-428-11	CARBON	1K	5%	1/6W
R420	1-259-476-11	CARBON	100K	5%	1/6W
R431	1-259-452-11	CARBON	10K	5%	1/6W
R432	1-259-431-11	CARBON	1.3K	5%	1/6W
R433	1-259-426-11	CARBON	820	5%	1/6W
R434	1-259-431-11	CARBON	1.3K	5%	1/6W
R435	1-259-440-11	CARBON	3.3K	5%	1/6W

Ref.No.	Part No.	Description			
R436	1-259-450-11	CARBON	8.2K	5%	1/6W
R437	1-259-452-11	CARBON	10K	5%	1/6W
R438	1-259-452-11	CARBON	10K	5%	1/6W
R439	1-259-452-11	CARBON	10K	5%	1/6W
R440	1-259-460-11	CARBON	22K	5%	1/6W
R441	1-259-452-11	CARBON	10K	5%	1/6W
R442	1-259-424-11	CARBON	680	5%	1/6W
R443	1-259-450-11	CARBON	8.2K	5%	1/6W
R444	1-259-440-11	CARBON	3.3K	5%	1/6W
R445	1-259-460-11	CARBON	22K	5%	1/6W
R446	1-259-432-11	CARBON	1.5K	5%	1/6W
R447	1-259-460-11	CARBON	22K	5%	1/6W
R448	1-259-420-11	CARBON	470	5%	1/6W
R449	1-259-428-11	CARBON	1K	5%	1/6W
R450	1-259-476-11	CARBON	100K	5%	1/6W
R451	1-259-448-11	CARBON	6.8K	5%	1/6W
R452	1-259-466-11	CARBON	39K	5%	1/6W
R453	1-259-468-11	CARBON	47K	5%	1/6W
R454	1-259-430-11	CARBON	1.2K	5%	1/6W
R455	1-259-444-11	CARBON	4.7K	5%	1/6W
R456	1-259-452-11	CARBON	10K	5%	1/6W
R457	1-259-428-11	CARBON	1K	5%	1/6W
R458	1-259-452-11	CARBON	10K	5%	1/6W
R459	1-259-452-11	CARBON	10K	5%	1/6W
R461	1-247-700-11	CARBON	100	5%	1/4W
R462	1-259-492-11	CARBON	470K	5%	1/6W
R463	1-259-472-11	CARBON	68K	5%	1/6W
R464	1-259-452-11	CARBON	10K	5%	1/6W
R465	1-259-452-11	CARBON	10K	5%	1/6W
R467	1-259-452-11	CARBON	10K	5%	1/6W
R468	1-259-452-11	CARBON	10K	5%	1/6W
R501	1-259-468-11	CARBON	47K	5%	1/6W
R502	1-259-434-11	CARBON	1.8K	5%	1/6W
R503	1-259-434-11	CARBON	1.8K	5%	1/6W
R504	1-259-448-11	CARBON	6.8K	5%	1/6W
R505	1-259-442-11	CARBON	3.9K	5%	1/6W
R508	1-259-452-11	CARBON	10K	5%	1/6W
R511	1-259-468-11	CARBON	47K	5%	1/6W
R512	1-259-434-11	CARBON	1.8K	5%	1/6W
R513	1-259-434-11	CARBON	1.8K	5%	1/6W
R514	1-259-448-11	CARBON	6.8K	5%	1/6W
R515	1-259-442-11	CARBON	3.9K	5%	1/6W
R518	1-259-452-11	CARBON	10K	5%	1/6W
R521	1-259-486-11	CARBON	270K	5%	1/6W
R522	1-259-472-11	CARBON	68K	5%	1/6W
R523	1-259-463-11	CARBON	30K	5%	1/6W
R524	1-259-452-11	CARBON	10K	5%	1/6W
R525	1-259-446-11	CARBON	5.6K	5%	1/6W
R526	1-259-440-11	CARBON	3.3K	5%	1/6W
R527	1-259-468-11	CARBON	47K	5%	1/6W
R528	1-259-459-11	CARBON	20K	5%	1/6W
R531	1-259-486-11	CARBON	270K	5%	1/6W
R532	1-259-472-11	CARBON	68K	5%	1/6W
R533	1-259-463-11	CARBON	30K	5%	1/6W
R534	1-259-452-11	CARBON	10K	5%	1/6W
R535	1-259-446-11	CARBON	5.6K	5%	1/6W
R536	1-259-440-11	CARBON	3.3K	5%	1/6W

Ref.No.	Part No.	Description			
R537	1-259-468-11	CARBON	47K	5%	1/6W
R538	1-259-459-11	CARBON	20K	5%	1/6W
R539	1-259-460-11	CARBON	22K	5%	1/6W
R549	1-259-460-11	CARBON	22K	5%	1/6W
R551 ⚠	1-212-865-00	FUSIBLE	22	5%	1/4W F
R555	1-259-476-11	CARBON	100K	5%	1/6W
R556 ⚠	1-247-712-11	CARBON	820	5%	1/4W F
R559	1-259-482-11	CARBON	180K	5%	1/6W
R561 ⚠	1-249-443-11	CARBON	0.47	5%	1/4W F
R562 ⚠	1-249-443-11	CARBON	0.47	5%	1/4W F
R569	1-259-482-11	CARBON	180K	5%	1/6W
R570	1-259-452-11	CARBON	10K	5%	1/6W
R601	1-259-498-91	CARBON	820K	5%	1/6W
R602	1-259-460-11	CARBON	22K	5%	1/6W
R603	1-259-412-11	CARBON	220	5%	1/6W
R604	1-259-468-11	CARBON	47K	5%	1/6W
R605	1-259-476-11	CARBON	100K	5%	1/6W
R606	1-259-468-11	CARBON	47K	5%	1/6W
R607	1-259-456-11	CARBON	15K	5%	1/6W
R608	1-259-447-11	CARBON	6.2K	5%	1/6W
R609	1-259-476-11	CARBON	100K	5%	1/6W
R610	1-259-476-11	CARBON	100K	5%	1/6W
R611	1-259-476-11	CARBON	100K	5%	1/6W
R612	1-259-476-11	CARBON	100K	5%	1/6W
R613	1-259-476-11	CARBON	100K	5%	1/6W
R614	1-259-476-11	CARBON	100K	5%	1/6W
R651	1-259-428-11	CARBON	1K	5%	1/6W
R652	1-259-476-11	CARBON	100K	5%	1/6W
R653	1-259-428-11	CARBON	1K	5%	1/6W
R654	1-259-476-11	CARBON	100K	5%	1/6W
R655	1-259-420-11	CARBON	470	5%	1/6W
R656	1-259-476-11	CARBON	100K	5%	1/6W
R657	1-259-420-11	CARBON	470	5%	1/6W
R658	1-259-476-11	CARBON	100K	5%	1/6W
R659	1-259-428-11	CARBON	1K	5%	1/6W
R660	1-259-476-11	CARBON	100K	5%	1/6W
R661	1-259-428-11	CARBON	1K	5%	1/6W
R662	1-259-476-11	CARBON	100K	5%	1/6W
R663	1-259-420-11	CARBON	470	5%	1/6W
R664	1-259-476-11	CARBON	100K	5%	1/6W
R665	1-259-420-11	CARBON	470	5%	1/6W
R666	1-259-476-11	CARBON	100K	5%	1/6W
R667	1-259-428-11	CARBON	1K	5%	1/6W
R668	1-259-476-11	CARBON	100K	5%	1/6W
R669	1-259-428-11	CARBON	1K	5%	1/6W
R670	1-259-476-11	CARBON	100K	5%	1/6W
R671	1-259-428-11	CARBON	1K	5%	1/6W
R672	1-259-476-11	CARBON	100K	5%	1/6W
R673	1-259-428-11	CARBON	1K	5%	1/6W
R674	1-259-476-11	CARBON	100K	5%	1/6W
R675	1-259-428-11	CARBON	1K	5%	1/6W
R676	1-259-476-11	CARBON	100K	5%	1/6W
R677	1-259-428-11	CARBON	1K	5%	1/6W
R678	1-259-476-11	CARBON	100K	5%	1/6W
R679	1-259-498-91	CARBON	820K	5%	1/6W
R680	1-259-498-91	CARBON	820K	5%	1/6W
R681	1-259-476-11	CARBON	100K	5%	1/6W

Note:
The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

Note:
Les composants identifiés par une marque ⚠ sont critiques pour la sécurité.
Ne les remplacer que par une pièce portant le numéro spécifié.

Ref.No.	Part No.	Description			
R682	1-259-476-11	CARBON	100K	5%	1/6W
R683	1-259-476-11	CARBON	100K	5%	1/6W
R684	1-259-476-11	CARBON	100K	5%	1/6W
R685	1-259-476-11	CARBON	100K	5%	1/6W
R686	1-259-476-11	CARBON	100K	5%	1/6W
R687	1-259-476-11	CARBON	100K	5%	1/6W
R688	1-259-476-11	CARBON	100K	5%	1/6W
R689	1-259-476-11	CARBON	100K	5%	1/6W
R690	1-259-476-11	CARBON	100K	5%	1/6W
R691	1-259-452-11	CARBON	10K	5%	1/6W
R692	1-259-456-11	CARBON	15K	5%	1/6W
R693	1-259-452-11	CARBON	10K	5%	1/6W
R694	1-259-452-11	CARBON	10K	5%	1/6W
R695	1-259-452-11	CARBON	10K	5%	1/6W
R701	1-259-401-11	CARBON	75	5%	1/6W
R702	1-259-452-11	CARBON	10K	5%	1/6W
R703	1-259-396-11	CARBON	47	5%	1/6W
R704	1-259-422-11	CARBON	560	5%	1/6W
R705	1-259-401-11	CARBON	75	5%	1/6W
R706	1-259-452-11	CARBON	10K	5%	1/6W
R707	1-259-396-11	CARBON	47	5%	1/6W
R708	1-259-422-11	CARBON	560	5%	1/6W
R709	1-259-401-11	CARBON	75	5%	1/6W
R710	1-259-401-11	CARBON	75	5%	1/6W
R711	1-259-452-11	CARBON	10K	5%	1/6W
R712	1-259-396-11	CARBON	47	5%	1/6W
R713	1-259-422-11	CARBON	560	5%	1/6W
R714	1-259-498-91	CARBON	820K	5%	1/6W
R715	1-259-474-11	CARBON	82K	5%	1/6W
R716	1-259-464-11	CARBON	33K	5%	1/6W
R717	1-259-426-11	CARBON	820	5%	1/6W
R718	1-259-440-11	CARBON	3.3K	5%	1/6W
R719	1-259-441-11	CARBON	3.6K	5%	1/6W
R720	1-259-440-11	CARBON	3.3K	5%	1/6W
R721	1-259-452-11	CARBON	10K	5%	1/6W
R722	1-259-452-11	CARBON	10K	5%	1/6W
R723	1-259-476-11	CARBON	100K	5%	1/6W
R724	1-259-476-11	CARBON	100K	5%	1/6W
R751	1-259-401-11	CARBON	75	5%	1/6W
R752	1-259-401-11	CARBON	75	5%	1/6W
R753	1-259-498-91	CARBON	820K	5%	1/6W
R754	1-259-498-91	CARBON	820K	5%	1/6W
R755	1-259-452-11	CARBON	10K	5%	1/6W
R756	1-259-452-11	CARBON	10K	5%	1/6W
R757	1-259-396-11	CARBON	47	5%	1/6W

Ref.No.	Part No.	Description			
R758	1-259-396-11	CARBON	47	5%	1/6W
R759	1-259-422-11	CARBON	560	5%	1/6W
R760	1-259-428-11	CARBON	1K	5%	1/6W
R761	1-259-401-11	CARBON	75	5%	1/6W
R762	1-259-401-11	CARBON	75	5%	1/6W
R763	1-259-452-11	CARBON	10K	5%	1/6W
R764	1-259-452-11	CARBON	10K	5%	1/6W
R765	1-259-396-11	CARBON	47	5%	1/6W
R766	1-259-396-11	CARBON	47	5%	1/6W
R767	1-259-422-11	CARBON	560	5%	1/6W
R768	1-259-428-11	CARBON	1K	5%	1/6W
R769	1-259-452-11	CARBON	10K	5%	1/6W
R770	1-259-452-11	CARBON	10K	5%	1/6W
R771	1-259-396-11	CARBON	47	5%	1/6W
R772	1-259-396-11	CARBON	47	5%	1/6W
R773	1-259-422-11	CARBON	560	5%	1/6W
R774	1-259-428-11	CARBON	1K	5%	1/6W
R775	1-259-468-11	CARBON	47K	5%	1/6W
R781	1-259-474-11	CARBON	82K	5%	1/6W
R782	1-259-464-11	CARBON	33K	5%	1/6W
R783	1-259-426-11	CARBON	820	5%	1/6W
R784	1-259-440-11	CARBON	3.3K	5%	1/6W
R785	1-259-441-11	CARBON	3.6K	5%	1/6W
R786	1-259-440-11	CARBON	3.3K	5%	1/6W
R791	1-259-474-11	CARBON	82K	5%	1/6W
R792	1-259-464-11	CARBON	33K	5%	1/6W
R793	1-259-426-11	CARBON	820	5%	1/6W
R794	1-259-440-11	CARBON	3.3K	5%	1/6W
R795	1-259-441-11	CARBON	3.6K	5%	1/6W
R796	1-259-440-11	CARBON	3.3K	5%	1/6W
R801	1-259-428-11	CARBON	1K	5%	1/6W
R802	1-259-428-11	CARBON	1K	5%	1/6W
R803	1-259-452-11	CARBON	10K	5%	1/6W
R804	1-259-452-11	CARBON	10K	5%	1/6W
R805	1-259-438-11	CARBON	2.7K	5%	1/6W
R806	1-259-452-11	CARBON	10K	5%	1/6W
R807	1-259-480-11	CARBON	150K	5%	1/6W
R808	1-259-480-11	CARBON	150K	5%	1/6W
R809	1-259-428-11	CARBON	1K	5%	1/6W
R810	1-259-428-11	CARBON	1K	5%	1/6W
R811	1-259-428-11	CARBON	1K	5%	1/6W
R812	1-259-428-11	CARBON	1K	5%	1/6W
R819	1-259-436-11	CARBON	2.2K	5%	1/6W
R820	1-259-404-11	CARBON	100	5%	1/6W
R951	1-259-408-11	CARBON	150	5%	1/6W

Ref.No.	Part No.	Description
R952	1-259-414-11	CARBON 270 5% 1/6W
R953	1-259-414-11	CARBON 270 5% 1/6W
R954	1-259-452-11	CARBON 10K 5% 1/6W
R955	1-259-452-11	CARBON 10K 5% 1/6W
R956	1-259-452-11	CARBON 10K 5% 1/6W
R957	1-259-452-11	CARBON 10K 5% 1/6W
R958	1-259-452-11	CARBON 10K 5% 1/6W
RT201	1-230-682-11	RES, ADJ, CARBON 1M
RT202	1-230-682-11	RES, ADJ, CARBON 1M
RT203	1-230-682-11	RES, ADJ, CARBON 1M
RT204	1-230-682-11	RES, ADJ, CARBON 1M
RT301	1-228-994-00	RES, ADJ, METAL GLAZE 10K
RT401	1-228-995-00	RES, ADJ, METAL GLAZE 22K
RT402	1-228-991-00	RES, ADJ, METAL GLAZE 2.2K
RT431	1-228-995-00	RES, ADJ, METAL GLAZE 22K
RT432	1-228-991-00	RES, ADJ, METAL GLAZE 2.2K
RV801	1-237-918-11	RES, VAR, CARBON 20KX5 (MASTER VOLUME)
RV981	1-237-921-11	RES, VAR, CARBON 10K/10K (INPUT LEVEL)
RV982	1-237-920-11	RES, VAR, CARBON 20K/20K(INPUT BALANCE)
RY401	1-515-614-11	RELAY
RY801	1-515-614-11	RELAY
RY802	1-515-614-11	RELAY
RY803	1-515-614-11	RELAY
S901	1-554-303-21	SWITCH, KEY BOARD (SET)
S902	1-554-303-21	SWITCH, KEY BOARD (1)
S903	1-554-303-21	SWITCH, KEY BOARD (2)
S904	1-554-303-21	SWITCH, KEY BOARD (3)
S905	1-554-303-21	SWITCH, KEY BOARD (DELAY TIME L-)
S906	1-554-303-21	SWITCH, KEY BOARD (DELAY TIME L+)
S907	1-554-303-21	SWITCH, KEY BOARD (DELAY TIME R-)
S908	1-554-303-21	SWITCH, KEY BOARD (DELAY TIME R+)
S909	1-553-856-00	SWITCH, KEY BOARD (OFF)
S910	1-553-856-00	SWITCH, KEY BOARD (MATRIX)
S911	1-553-856-00	SWITCH, KEY BOARD (HALL)
S912	1-553-856-00	SWITCH, KEY BOARD (SIMULATED)
S913	1-553-856-00	SWITCH, KEY BOARD (SURROUND)
S951	1-554-303-21	SWITCH, KEY BOARD (VIDEO 1)
S952	1-554-303-21	SWITCH, KEY BOARD (VIDEO 2)
S953	1-554-303-21	SWITCH, KEY BOARD (VIDEO 3)
S954	1-554-303-21	SWITCH, KEY BOARD (VIDEO 4)
S955	1-554-303-21	SWITCH, KEY BOARD (AUDIO)
S971	1-554-303-21	SWITCH, KEY BOARD (CENTER MODE)
S972	1-554-303-21	SWITCH, KEY BOARD (TEST TONE)
S981	1-571-327-11	SWITCH, ROTARY (SURROUND LEVEL)
S991	1-554-920-11	SWITCH, PUSH (1 KEY)(POWER)

Ref.No.	Part No.	Description
STJ751	1-566-846-11	CONNECTOR,(S) TERMINAL 4P(S VIDEO 2 OUT)
STJ752	1-566-846-11	CONNECTOR,(S) TERMINAL 4P(S VIDEO 2 IN)
STJ753	1-566-846-11	CONNECTOR,(S) TERMINAL 4P(S VIDEO 1 OUT)
STJ754	1-566-846-11	CONNECTOR, (S) TERMINAL 4P(S VIDEO 1 IN)
STJ755	1-566-846-11	CONNECTOR, (S) TERMINAL 4P (S VIDEO MONITOR OUT)
T901 ⚠	1-449-339-11	TRANSFORMER, POWER
XT451	1-567-953-11	VIBRATOR, CRYSTAL (78.336MHz)
XT452	1-567-772-11	VIBRATOR, CERAMIC (4.19MHz)

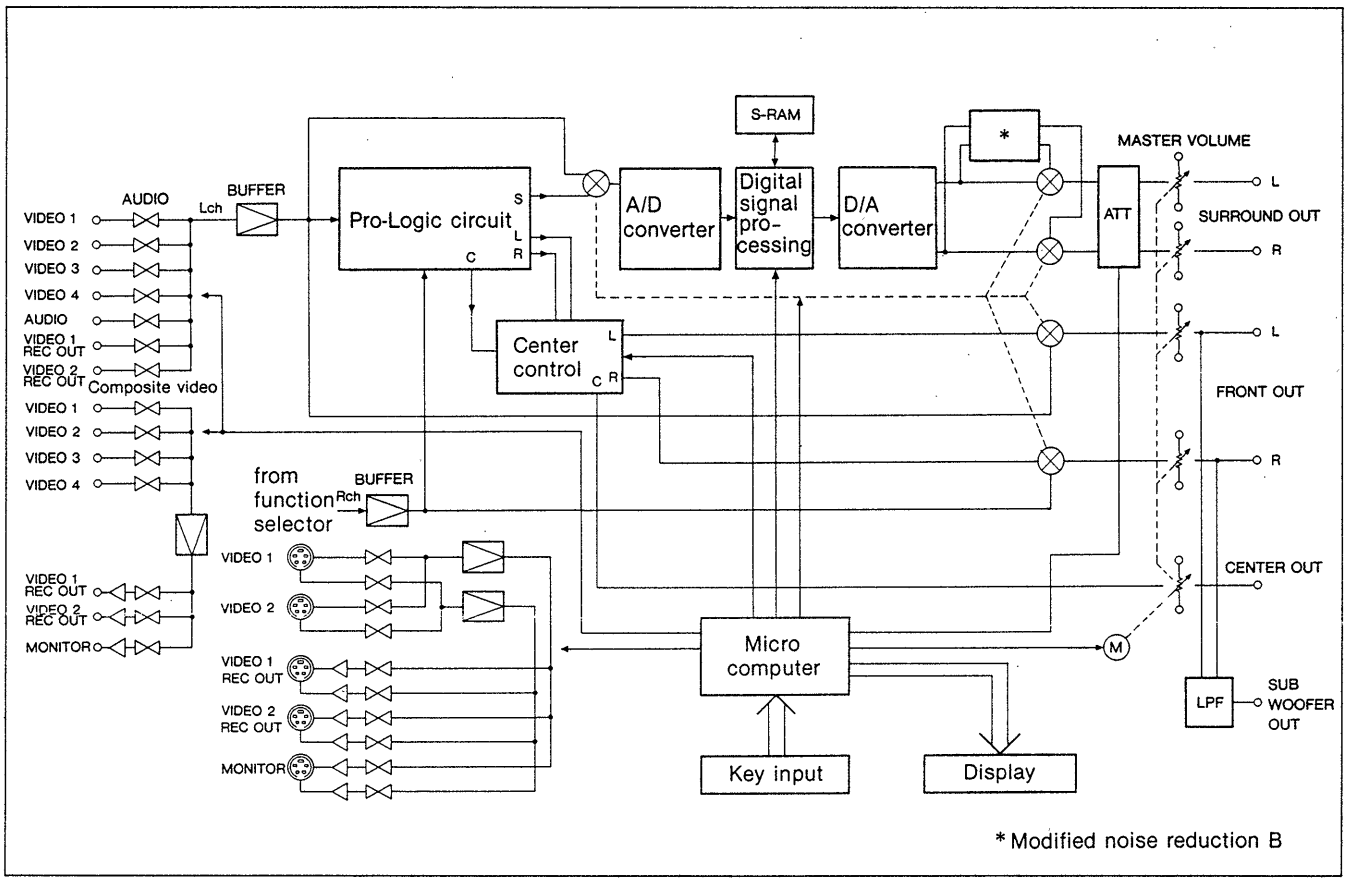
ACCESSORY & PACKING MATERIAL

	1-463-933-11	REMOTE COMMANDER (RM-S77)
	1-551-315-00	CORD, CONNECTION
	2-394-123-01	COVER, BATTERY
	3-769-642-11	MANUAL, INSTRUCTION
	3-703-450-01	INSTRUCTION (US)
*	3-704-346-01	SHEET (STANDARD), PROTECTION
	4-847-802-00	SCREW
	4-908-051-01	CUSHION
*	4-915-425-51	INDIVIDUAL CARTON
	4-915-702-01	LABEL, CAUTION, DOLBY SURROUND
*	4-923-195-01	LABEL, MODEL NUMBER (U/CA)

Note:
The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

Note:
Les composants identifiés par une marque ⚠ sont critiques pour la sécurité.
Ne les remplacer que par une pièce portant le numéro spécifié.

Block Diagram



Troubleshooting guide

Before going through the check list below, first refer back to the connection and operating procedures.
Should any problem persist after you have made these checks, consult your nearest Sony dealer.

Trouble	Cause/remedy
No audio	• Faulty connection (page 5) • Faulty function selection (page 7) • Faulty operation of the connected equpment (see its instruction manual.) • MASTER VOLUME is set to 0 (page 7)
No audio from the surround speakers	• SURROUND OFF is selected. In this mode no sound will be heard from them. • The surround level is set to $-\infty$.
Remote control operation cannot be performed.	• Exausted batteries (page 6) • Incorrect polarity of the batteries (page 6) • There is an obstacle between the the commander and the unit.

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Audio Group

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